POLYCOM®

Polycom® RSS™ 4000 System User Guide

6.4.0 | Apr. 2011 | 3725-32870-002/B

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1

Polycom® RSS™ 4000 Introduction

Overview

The Polycom® RSS™ 4000 Recording and Streaming Server is a web server that enables you to easily perform recording, live streaming, stream media processing and multimedia archiving, as needed. Polycom® RSS™ 4000 system supports the recording of both single-point and multipoint video conferences, including H.239 data contents. It can record and archive up to 1080P and live stream to the network audience at a quality of up to 720P.

The Polycom® RSS™ 4000 provides the following features:

- Supports recording of up to 15 concurrent video conferences, as well as full video, audio and content recording.
- Supports resolutions of up to 1920 x 1080 (1080p) and 4Mbps of bandwidth for recording.
- Supports video conference live streaming, using Windows Media, which can use two different bandwidths.
- Supports the multicast of recorded or live streaming events, with up to 20 simultaneous multicast sessions.
- Uses a Virtual Recording Room (VRR) as a base for recording and authorizing playback permission. Users can have their own VRR for recording and playing back.
- Offers various recording methods. Users can start a recording from endpoints, an MCU or the Web user interface.
- Supports the integration with Polycom HD Series endpoints and Polycom RMX/MGC conference platform to manually and automatically perform recording, live streaming and playback.
- Supports the integration with Polycom Video Media Center™ (VMC) 1000 V2.0 for more powerful stream media management.
- Supports integration with Exchange server, and works with other Polycom video conferencing devices for recording or live streaming conferences when scheduling conferences through Outlook.
- Offers recorded archives in multiple video formats, so that users can view content through a H.323 based endpoint, the Web user interface and MP4-supported players like an iPhone and an iPod.
- Supports the recordings of audio-only and conversion to MP3 files for downloading and playing.

- Supports SSL certificate authentication encryption to ensure the data security of Web communication.

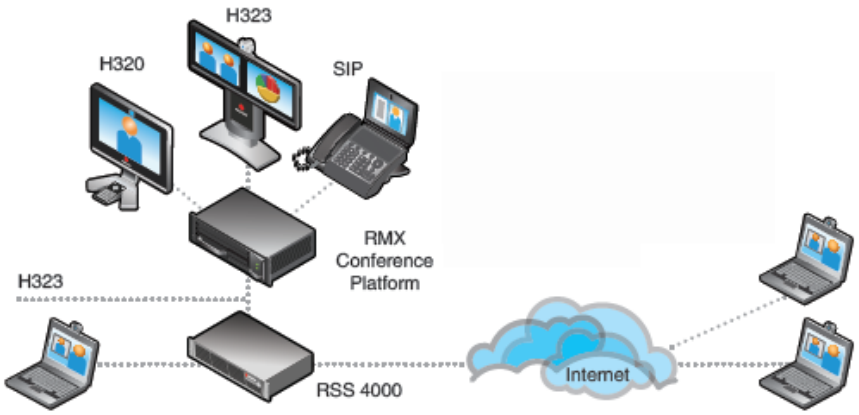

Figure 1-1 Polycom® RSS™ 4000's Application in the Video Conference Network

System Hardware Installation

General Safety Precautions

Follow these rules to ensure general safety:

- Keep the area around the Polycom® RSS™ 4000 unit clean, free of clutter and well ventilated.
- Decide on a suitable location for the equipment rack that will hold the Polycom® RSS™ 4000 unit and is near a grounded power outlet.
- Use a regulating uninterruptible power supply (UPS) to protect the Polycom® RSS™ 4000 unit from power surges and voltage spikes, and to keep it operating in case of a power failure.

Unpack the Package

To unpack the system package:

1. Check the package to ensure its completion.
2. Open the package and check the items included. The following items should be included:
   - One Polycom® RSS™ 4000 server unit
   - Two power cables
   - Two RJ-45 network cables
   - One DB9 serial port cable
   - A CD
   - A license and a user registration card
3. Take all items out of the package and check if any of them is in poor condition.

If you find damage, file a claim with the delivery carrier. Polycom is not responsible for damage sustained during shipment of this product.

Install the System

1. Place the Polycom® RSS™ 4000 unit on a stable flat surface in the selected location.
2. Insert each power cord connector into the rear of the unit and connect each to an appropriately rated socket outlet.

   The Polycom® RSS™ 4000 unit is supplied with two power cords, BOTH power cords should be connected to the mains power supply during normal operation.
3. Connect the LAN cable to LAN1 in the back of the system.

   The LAN2 port is not used now and is reserved for future use.
4. Turn on the power switch.

Figure 1-2 Connecting Cables

Plug Acts as Disconnect Device:

- The socket outlets to which this apparatus is connected must be installed near the equipment and must always be readily accessible.
- In order to fully isolate the equipment then both power cords should be disconnected otherwise the system will remain energized.

System Indicators

When the system is running, indicators on the front panel indicate operating conditions of the system. See the table below for the indicators and their explanations.

Table 1-1 Explanation of System Indicators

Indicator	Panel Identifier	Status	Explanation
LAN1 Activity Status Indicator	LAN1 LED	Green light on	Network port is functioning normally, with no data being transmitted
		Green light blinking	Network port is functioning normally, with data being transmitted
		Off	No Network connection
System Status Indicator	STATUS LED	Blue light on	System is functioning normally, with no resources being used (idle)
		Blue light blinking	System is functioning normally, with resources being used
		Red light on	System alert, with no resources being used (idle)

Indicator	Panel Identifier	Status	Explanation
		Red light blinking	System alert, with resources being used
Hard Disk Status Indicator	HDD LED	Blue light on	Hard disk is functioning normally
		Blue light blinking	System is recording
		Red light on	Hard disk is functioning abnormally
Power Status Indicator	Power LED	Green light on	Power is functioning normally
		Red light blinking	Power alert

System Initial Configuration

Preparations before Configuration

Obtaining Network Information

Before the initial configuration, get the following information from your network administrator to configure Polycom® RSS™ 4000 to your local network:

- IP address, subnet mask, and default gateway IP address to be assigned to Polycom® RSS™ 4000 LAN ports.
- (Optional) Your DNS server address. The Polycom® RSS™ 4000 is shipped with the default DNS server addresses 208.67.222.222 and 208.67.220.220 pre-configured.
- (Optional) Gatekeeper address, and the H.323 prefix and E.164 number to be assigned to the Polycom® RSS™ 4000.

Obtaining the Product Activation Key

Before using Polycom® RSS™ 4000, you need to activate the device. Follow the procedure below to obtain the product activation key. When you power on and log in to the Polycom® RSS™ 4000 for the first time, the system displays the product activation page, prompting you to enter a product activation key.

1. Enter the following website address in the address bar of the browser: **http://support.polycom.com**, and go to the Polycom Support Center.
2. Enter your Email address and password to log in or register for a new account.
3. Go to Licensing & Product Registration > Activation/Upgrade.
4. Follow the page prompts step by step to generate the Key Code required for system activation.

If you are required to enter the *License Number* and *Serial Number* of the device, you can find them from the document provided with the Polycom® RSS™ 4000 device.

5 Record the activation key (Key Code) on the page.

Modifying the Initial IP Address

The system default IP address before delivery is:

IP Address: 192.168.1.254

Subnet Mask: 255.255.255.0

Gateway: 192.168.1.1

There are two ways to change the system initial IP address:

- Via Web login page (recommended)
- Via Console or Telnet connection

To change IP address via the Web login page:

1 Connect your PC to the LAN 1 port of the Polycom® RSS™ 4000 with a cross-over network cable, or connect your PC and Polycom® RSS™ 4000 to the same switch in the LAN.

2 Set your PC IP address to be in the same network segment as the Polycom® RSS™ 4000.

3 Run the Web browser on your PC, enter **https://<system IP address>** in the address bar, and then press Enter.

By default, Polycom® RSS™ 4000 Web server has an untrusted certificate and uses the HTTPS protocol to set up SSL secure connection with client end.

- If you use Internet Explorer as a browser, you will be prompted that the security certificate for the website has some problem. Please choose Continue to this website to enter the Login page.
- If you use Firefox browser, you will be prompted that the connection is not trusted. Please add the site being connected to Security Exception as suggested on the page and enter the Login page.

After you install the security certificate issued by the Certification Authority in your system, you will not receive this alert again. See *Certificate Setting*.

4 (Optional) Select a language for the Web interface from the *Select language* list in the top right of the page.

5 On the Login page, enter the administrator's username and password, and then click the **Log In** button. The default username and password are both admin.

6 The Product Activation page displays when you first-time log in. Enter the activation key obtained from the previous step *Obtaining the Product Activation Key* in the **Activation Key** box and click **Update**.

If you do not activate the system, you can still use the Web interface, but cannot perform incoming calling, recording, live streaming and video playing operations using the system.

7 When prompted to restart the system, select **No** to proceed with setting the IP address.

8 Click **System Config>IP Setting** to enter the IP Setting page. Set following parameters:

Table 1-2 IP Setting Parameters Description

Parameter	Description
Obtain an IP Address Automatically (DHCP)	If the user network is configured with a Dynamic Host Configuration Protocol (DHCP) server, select this option to automatically obtain the IP address.
Using the following IP Address	Select this option to use the static IP address. You need to manually enter the IP address, subnet mask, and gateway IP address.
Obtain DNS Server Address Automatically	Used in combination with the DHCP option. When the *Obtain an IP Address Automatically (DHCP)* option is selected, the system will automatically obtain DNS server address from a DHCP server in the network.
Using the following DNS Server Address	If you did not select the option to automatically obtain DNS address, you must enter the preferred/alternate DNS server addresses here for the system to resolve domain names.
Using the following NAT Server	The Network Address Translation (NAT) function of the system enables you to translate the private network IP address of packet into a public network IP address before transmission. To enable NAT, select this check box and then enter the public network IP address to be displayed publicly.
LAN Speed	Sets the speed/duplex modes for LAN ports. Supports the 10/100M Full Duplex or Half Duplex mode and the 1000M network. Select *Auto* to use auto-negotiation. **Note:** When setting LAN port speed, contact your network administrator to ensure that the switch link rate matches the system port.

9 Click **Update** and a dialog box will pop up, in which you should confirm to restart the system to apply the setting.

To change IP address via RS-232 Console or Telnet:

1 Connect your PC to the RS232 port of the Polycom® RSS™ 4000 with a serial port cable and activate the console port (115200, 8bits).

2 After you logged in to the console port, input the default password **POLYCOM** to enter the system.

3 Enter "?" or "help" after the prompt "#" and the system displays available command information.

4 Change IP address using the command in the format below:

set lan1 ip {dhcp | static <ip> netmask <mask> gw <gateway>}

For example, to set the IP address of LAN1 port to 172.21.103.29, subnet mask to 255.255.255.0 and gateway address to 172.21.103.254, enter the following command:

```
# set lan1 ip static 172.21.103.29 netmask 255.255.255.0 gw 172.21.103.254

Reboot is require in order for the change to take effect. Reboot now? [Y for yes
 / N for no]Y

restart system ...
```

5 After the system is restarted, activate the device according to Steps 3 to 6 described in the section *To change IP address via the Web login page*.

- The same steps are also applicable for a Telnet connection.
- Only one console (Telnet or RS232) at a time can be connected.

(Optional) Installing Multicast Controls

When you activate the device and subsequently connect to the system's web management interface for the first time, you will be prompted that a Polycom RSS 4000 multicast add-in is required at the top of the browser. Make sure you use the Internet Explorer browser. If you have already purchased the multicast license, please install the controls according to the prompt on the screen. Only after this installation can your computer receive multicast videos sent by Polycom® RSS™ 4000 system.

- If you use an IE7.0 or IE8.0 browser, please first confirm the Security Mode option (Tools->Internet Options->Security) is disabled before installing the controls, to ensure successful installation and normal use of the multicast function.
- If you use the Windows 7 operation system, you must log in to the system as an administrator to be able to install the controls.

(Optional) Configuring the Gatekeeper Settings

If a gatekeeper is configured on your network, register the Polycom® RSS™ 4000 to the gatekeeper to simplify calling.

To register the system to the gatekeeper:

1 Click **System Config>Signaling Setting>Gatekeeper** in the Web configuration interface.

2 Set the following parameters in the gatekeeper page:

Table 1-3 Gatekeeper Parameters Description

Parameter	Description
Register to Gatekeeper	Indicates whether or not to register to the gatekeeper. You must check this option to set the following parameters.
Primary (Alternate) Gatekeeper	Indicates whether the system has been registered to the primary (or alternate) gatekeeper.
Gatekeeper IP Address	Specifies the IP address for the primary (or alternate) gatekeeper.

Parameter	Description
Gatekeeper Port	Specifies the port number for the primary (or alternate) gatekeeper.
System Prefix/E164.	Sets the E.164 number for the system.
System H.323Alias	Sets the H.323 alias for the system.

3 Click **Update** and a dialog box will pop up, in which you should confirm to restart the system to apply the setting.

User Interface

The Polycom® RSS™ 4000 provides two types of user interfaces: Web configuration interface and endpoint TV user interface.

Web User Interface

The system provides a user-friendly Web-based operations interface. To easily and conveniently configure recording parameters, record and play back, monitor the system and maintain the device, you only need to access the Polycom® RSS™ 4000 Web client program through a browser.

TV User Interface

TV user interface (TV UI) provides a menu-based onscreen interface displayed on an endpoint. You can perform common recording and playback operations with an endpoint's remote control and onscreen operation menus.

2

Basic Operations

Introduction to the Web User Interface

Run the Web browser on your computer. Enter **https://<system IP address>** in the address bar and then press Enter to display Web login page of Polycom ® RSS™ 4000 system. Enter your username and password to log in to the system. Default administrator username and password are both **admin**.

The Web UI basically consists of the following four parts:

- Menu bar: Provides all the function groups for system configuration. You can navigate to specific function configuration pages through these menu items.
- Group of page controls: Enables you to perform controlling operations on a Web page:
  - : Displays information about the logged-on user and sets the displayed font size for the Web page.
  - : Enables you to exit the Web configuration page.
  - : Locks the Web configuration page. When you click this button, the system's web page is locked. You need to enter the password to unlock it before viewing and performing operations on it.
- Navigation/Operation bar: Provides navigation links to a group of related function pages, for which some available operation items may be shown.
- Lists/Configuration area: Shows item lists, detailed parameters, or configuration items.

The Web UI varies based on logged-on users' permission levels. The following figure is a screenshot of the Web UI displayed to a logged-on administrator.

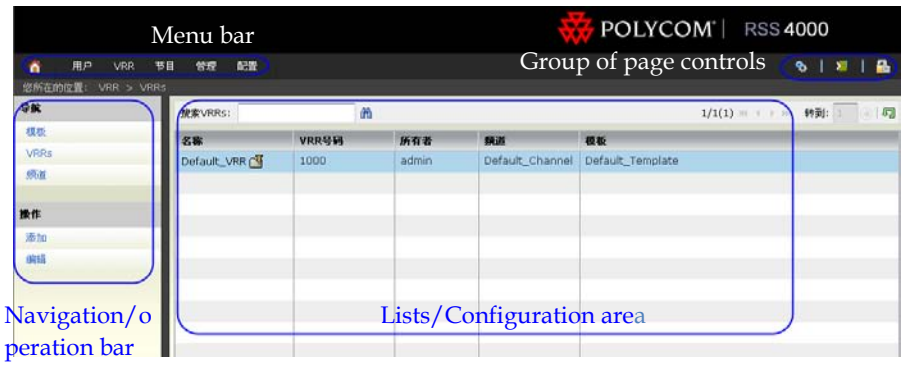

Figure 2-1 *Screenshot of the Polycom ® RSS™ 4000 Web UI*

User Permissions

You can log in to the Web UI as an administrator or a user.

The following table shows user permissions at different permission levels after login to the Web UI:

Table 2-4 Description of Web UI user permissions

	User	Administrator
Accessible information	▪ Personal settings ▪ Owned VRR ▪ Archives and live streaming recorded by the owned or authorized VRR ▪ Authorized archives	All pages
Operation permissions	View or edit	View, edit, and delete

Polycom ® RSS™ 4000 allows up to 200 users to be logged in to the Web UI at the same time.

Common Operations

List Sorting, Searching, and Refreshing

For all items listed on the Web UI (for example, VRR list, list of archives, user list, etc.), a unified search bar is provided for users to find specific items, navigate between pages, and refresh pages. All lists can be sorted by parameter properties.

To search for a target item in the list:

➢ Enter the full name or keyword of the item to be searched for in the Search… text field above the list, and then click .

- Keyword search is case sensitive.
- If you want to return to the all items list after searching is complete, clear all the characters in Search… and click .

To sort the list:

➢ Click a column header on the list to sort the list in ascending order based on the property indicated by the header.

Then, when a triangle icon appears, you can click it to sort the list in descending order.

To refresh the list:

➢ Click the button above the list.

Sizing the Pane

Move the mouse pointer to the border of the pane; when the pointer turns into , drag the border to change the width of the pane while holding down the left mouse button.

Windows Standard Multiple-Select Operations

While adding or deleting list items, you can perform standard batch-processing operations by pressing **Ctrl + targets** or **Shift + targets**.

Starting a Recording

You can start recording in the Polycom ® RSS™ 4000 system using one of the following methods:

- Start a recording by calling the endpoint from the Polycom® RSS™ 4000 Web UI (only for administrators).
- Start a recording by calling the Polycom® RSS™ 4000 system using the endpoint's remote control.
- Start a recording by connecting the Polycom® RSS™ 4000 system using MCU. If the Recording Link function is configured on the Polycom RMX Series conference platform and the platform is integrated with the Polycom® RSS™ 4000 system, the Polycom® RSS™ 4000 system can be called automatically for recording when a multi-point conference is being held through MCU. For more information about configuring Recording Link function on the MCU, see the user manual provided with the MCU.

This part describes how to start recording from the Web UI of the Polycom ® RSS™ 4000 system and the endpoint.

To start a recording from the Web UI (only for administrators):

1. Enter Polycom ® RSS™ 4000 system IP address in the address bar of the Web browser to access the Web UI.
2. Enter the username and password in the login page to log in to the system. Default username and password are both **admin**.
3. On the *Dashboard* page (which can also be displayed by clicking **Admin>Dashboard**) of the Web homepage, click the **Dial out to record** button in the ***Signaling Connections*** area.
4. Set the following parameters in the dialog box that opens:

Table 2-5 Dial-out from the Web UI - Parameters Description

Parameter	Description
Address Type	Choose the address type used to call the endpoint that will start recording: IP address, E.164 prefix, or H.323 ID.

Parameter	Description
Address	Enter the endpoint address according to the setting of the address type item. The system supports entering the calling address with extended service number in the address box. If call Polycom® RMX™ series system, you can directly dial into the conference to be recorded on RMX by entering the numbers in the following format: ▪ [RMX E.164 prefix][conference number] - Use when every system has been registered to a gatekeeper ▪ For example, if the RMX prefix is 925 and the room number is 1001, dial "9251001" ▪ [RMX IP address]##[room number] - Use when a system has not been registered to a gatekeeper ▪ For example, if the RMX IP address is 172.22.30.40 and the room number is 1001, dial "172.22.30.40##1001"
VMR Name	Click the **Select** button to select a virtual recording room (VRR) to be used for recording. You can use the built-in default VRR. VRR is the basis of recording, and determines the recording policies. For more information about VRR, see *Virtual Recording Room* (VRR).

5 Click the **OK** button to initiate a recording call.

Once the connection between the Polycom ® RSS™ 4000 system and the endpoint has been successfully established, the recording starts immediately if the Recording Immediately function has been enabled in the VRR. Recording connections information and the buttons for pausing and stopping recording will be displayed in the *Signaling Connections* area. If recording is not started, the **Start Recording** button will be displayed. You can click it to start recording.

To start recording by dialing the Polycom ® RSS™ 4000 system:

1 Enter the E.164 prefix for the Polycom® RSS™ 4000 system on the remote control to call directly to connect to the Polycom® RSS™ 4000.

If your system or endpoint is not registered to the gatekeeper, call the system IP address directly to get connected.

2 The endpoint screen displays the Polycom® RSS™ 4000 onscreen menu when it has successfully established the connection with the Polycom® RSS™ 4000 system. Select the **Start Recording>Start** using the remote control to start a recording.

A blinking recording icon appears during the recording. You can pause/resume, stop, or cancel the recording using the menu on the operation page. See *Start Recording*.

Recordings performed by calling the IP address or E.164 prefix of the Polycom® RSS™ 4000 system use the default recording parameters of the system; you can also directly use defined parameters of a VRR to make recording by adding the VRR's number to the dial-in number. For more information, see *Dialing-in to a VRR to Start Recording*.

Playing Back Recorded Files

To play back recorded files stored in the Polycom ® RSS™ 4000, you can choose one of the following methods:

- Play back videos via quick code immediately, without entering the user interface. You can find the quick code in the Properties page of archives. For details, see *Quick Code*.
- Play back from the Polycom ® RSS™ 4000 Web UI.
- Play back from the Polycom® RSS™ 4000 TV UI. For more information, see *Viewing Archives*

To play back videos via quick code immediately:

➢ Use the remote control to dial the numbers in following formats which consist of the system IP address or E.164 prefix and archive quick code:

— **[RSS E.164 Prefix][Quick Code]#**, used if the system has been registered to a gatekeeper.

— **[RSS IP Address]##[Quick Code]#**, used if the system has not been registered to a gatekeeper.

For example, if the E.164 prefix of Polycom® RSS™ 4000 system is 1234 and the quick code of the recorded file required to be played back is 567890, you should dial 1234567890# to view the video immediately.

If the screen prompts to input the PIN code, you can input the correct PIN code through the number keypad on the remote control and then press "#". During the playback of video, you can press the up arrow key on the remote control to exit playing and return to the file list.

If the bandwidth at which a user endpoint is connected to Polycom® RSS™ 4000 is lower than the bandwidth used for archives to be played back, videos cannot be played back on the endpoint.

To play back from the Web UI:

1. Enter Polycom ® RSS™ 4000 system IP address in the address bar of the Web browser to access the Web UI.
2. Enter the username and password in the login page to log in to the system.
3. Choose **Media>Archives** at the upper part of the Web UI to access the archives page.
4. Select the archive to be played back from the archives list, then click the Play button in the *Archive Details* pane on the right side to play back the files.

   To play back the files, you can also click the Play button in the *Archive Files* pane on the right side.

3

Ordinary User Configuration

This chapter mainly describes Web configurations that ordinary users should set after logging into the Polycom® RSS™ 4000 system. For administrator users, see Chapter *Administrator Configuration*.

When you log in to the system for the first time using the account and password assigned by the administrator, a password setting box appears, prompting you to change your password. You may enter the system after setting a password that meets the requirements. Once you log in to the system, the following operations can be performed:

- Modifying personal settings. See *Personal Settings*.
- Viewing and modifying your own Virtual Recording Room (VRR). See *Virtual Recording Room (VRR)*.
- Playing back and downloading videos recorded by your own VRR or authorized archives, or modifying properties of the recorded file. See *Archives*.
- Viewing live streaming performed by you own VRR or authorized live streaming. See *Live Streaming*.
- Starting or stopping your own multicast, and viewing all the multicasting videos. See *Multicast*.

Personal Settings

You can set your own account information and change your password on the personal settings page.

Click **My Setting>My Setting** in the menu bar at the top of the page to open the personal settings page.

To modify personal settings:

1 You can configure the following parameters:

Table 3-6 Personal Setting Parameters Description

Parameter	Description
Full Name	Specifies your full name.
Description	Specifies additional related information.

2 Click **Update** to apply these settings.

To change password:

1. Click **Change My Password** in the *ACTIONS* area on the left side of the page.
2. In the popup password setting box, enter your old password, your new password, confirm password, and then click **OK**.

If successful, you will be prompted that your password has been successfully changed. Otherwise, you will have to follow instructions to set an appropriate password.

Only local users created in the Polycom® RSS™ 4000 system can change their passwords. This function is not available to Active Directory server users.

Virtual Recording Room (VRR)

A Virtual Recording Room (VRR) defines various recording-related parameters, which are the basis of all recordings. While creating a new user in the system, a VRR owned by the user is automatically generated. A VRR is identified by digits, and you can directly dial your own VRR to start recording by adding your VRR number to the dial-in number.

Click **VRR>VRRs** in the menu bar at the top of the page to open the VRR page. In this page you can view user-owned VRR information, including VRR's name, number, owner, channel and template being used.

In the list, you can search, sort and refresh those VRRs. For specific instructions, see *List Sorting, Searching, and Refreshing*.

Dialing-in to a VRR to Start Recording

When an endpoint or MCU tries to connect by directly dialing the IP address or E.164 prefix of the Polycom® RSS™ 4000 system, the default VRR parameters will be used to record. You can directly start recording using recording parameters defined in a VRR by adding the VRR number to the dial-in number.

To dial VRR through an endpoint's remote control:

- If both the Polycom® RSS™ 4000 and the endpoint are registered to a gatekeeper, the dial-in number is **[RSS E.164 prefix][VRR number]**.

  For example, if the Polycom® RSS™ 4000 E.164 is 1234 and your VRR number is 1000, you may dial "12341000".
- If the network is not configured with a gatekeeper, the dial-in number is **[RSS IP address]##[VRR number]**.

  For example, if the Polycom ® RSS™ 4000 IP address is 172.21.110.2 and your VRR number is 1000, you may dial "172.21.110.2##1000".

Modifying a VRR

You can modify several parameters of your own VRR.

To modify an existing VRR:

1. Click **VRR>VRRs** in the menu bar at the top of the page.
2. Double-click the VRR to be modified, or click that item and click **Edit** in the *ACTIONS* area on the left side of the page.
3. You can modify the following parameters:

Table 3-7 VRR Parameters Description

Parameter	Description
VRR Name	Specifies a unique name to identify the VRR. You can also use the default name generated by the system.
Use a Custom Name Prefix for the archive file name (Name Prefix+Date+Time)	Specifies whether to assign a name prefix for the file recorded with this VRR. The user can organize and identify a large number of recorded files conveniently with a custom name prefix. If this option is selected, enter the name in *Custom Name Prefix*. The system will automatically generate the file name in the following format according to the custom name and the date and time: Custom Name_Date_Time_Random Number. **Note:** Only letters, figures, _, space or multi-byte characters can be used for the name prefix, and the length is 4-20 characters.
VRR Number	Specifies a number to identify the VRR. You can directly dial the VRR to record by adding the VRR number when dialing the Polycom® RSS™ 4000 system. The number you entered must be unique and comprised of 4-8 digits.
Owner	VRR owner. It cannot be changed.
Channel	VRR channel. Click the **View** button for channel details. It cannot be changed.
Template	The template used by the VRR, which defines basic recording link parameters. Click the **View** button for template details. It cannot be changed.
Enable PIN Code for Playback	Specifies whether to enable PIN code protection for the archive. If a PIN code is set, you must enter the correct PIN code to play the archive through an endpoint. After this option is selected, you should enter a PIN code consisting of 4-8 digits in **PIN Code**. **Note:** This option does not apply to playback through the Web UI.
Recording Immediately	If this option is selected, the system will immediately start recording once you connect to the VRR. If deselected, you may need to manually start recording through the endpoint interface.
Email Notification	If this option is selected, once the VRR recorded video has completed its format conversion and is ready for viewing, the system will send an Email message to the address set here.
Default Recording Description	If necessary, you can enter additional VRR information in order to improve identification and classification management when there are many VRRs.

4 (Optional) Click the **Allowed User/Groups** tab to set allowed list for that VRR. Users and groups defined in the allowed list can view or modify VRR recorded files or live streaming.

Two lists display on the page. The upper one is a selection list that displays all local users created in the system. You can switch to group list by clicking the drop-down list on **the top of the page**.

The following list is the allowed list. All-user group (All_Users) and the VRR owner are included in the allowed list for VRR by default.

5 Either double-click an item to be allowed in the selection list, or click that item and click the **Add** button to add it to the allowed list. The newly added item is shown in the allowed list, and the already added items are identified by the icon in the user list.

— To delete an item from the allowed list, either double-click the item, or click the item and click the **Remove** button.

— To authorize a user to edit, check for that user in the allowed list.

Both add and delete operations support the Windows standard multiple-select operation.

6 Click **OK** to complete modifications to the VRR.

Archives

All files recorded by Polycom® RSS™ 4000 system are saved in the Archive page where ordinary users can only view following types of archives:

- Files recorded by users' own VRR
- Files recorded by the VRR for which the user has been added to the allowed list
- Recorded files for which the user has been added to the allowed list.

Viewing Archives

Click **Media>Archives** in the menu bar at the top of the page to display Archive page.

On the Archive page, you can view a summary of each archive, including name, owner, VRR number used, creation time, file size and converting status. You can also click an archive to show its details in the *Archive Details* area on the right of the page:

Table 3-8 Detailed Parameters Description for Archives

Parameter	Description
Name	The name of the archive.
Duration	The duration of the archive.
Video Type	The video protocol used by the archive.
Audio Type	The audio protocol used by the archive.
Content Type	Shows the existence of H.239 dual stream recording.
Description	Shows other additional information.

Parameter	Description
Play URLs	Lets you copy the URL of playing the archive to the clipboard. For archives recorded in two different bandwidths, clicking the *Copy* link will copy two URLs.

In the list, you can search, sort and refresh archives. For specific instructions, see *List Sorting, Searching, and Refreshing*.

Playing Back and Downloading Archives

Polycom® RSS™ 4000 system can save recorded videos into three different formats, which apply to different kinds of playback:

- Raw: Raw bit stream, which is automatically generated after the system completes the recording. This file can be played back through the endpoint TV UI interface and downloaded for investigating.
- WMV: The file in this format is automatically converted into this format after the system completes recording. This file can be either played back through the Web UI, or downloaded to your computer to play back. It will be played back in your computer default player.
- MP4: Can be downloaded to your computer or players that support MP4 files, like the iPhone and iPod. This file can only be generated when MP4 option in the recording template is enabled (see *Recording Template*).
- MP3: Can be downloaded to your computer or players that support MP3 files. This file can only be generated when the *Generate MP3 Audio File* option in the recording template is enabled (see *Recording Template*).

There are four statuses for the recorded file to indicate whether this file can be played or downloaded:

- Ready: The file can be played and downloaded
- Transcoding: The format is being converted, and thus the file is temporarily unavailable
- Waiting: The file is waiting to be converted, and thus temporarily unavailable
- Error: Error converting the format, the file is unavailable

To play back archives through the Web UI:

1. Click **Media>Archives** in the menu bar at the top of the page.
2. In the archives list, select the archive to be played back.
3. Click the Play button in the *Archive Details* area on the right side of the page. Windows Media Player opens to play the video.

   If the archive is recorded in two different bandwidths, two play buttons and their bandwidths will display in this area, and you may choose the appropriate button based on your network condition.

- Make sure the archive's format has been converted before playing it back; otherwise there will be no Play button in the Archive Detail area. You can also click Archive Files at the right bottom side of the page to expand its property pane and check the status. If the Play button corresponding to the WMV format appears as , indicating that archive is temporarily unavailable, you may need to wait until the format conversion is completed (i.e. the status is Ready) before viewing.
- If the Email notification function has been enabled for the VRR which is used to record archives, the system will send you an Email notification automatically once all archives have been converted and are ready for Web playback. For more information, see *Modifying a VRR*.

To download an archive:

1. Click **Media>Archives** in the menu bar at the top of the page.
2. In the archives list, select the archive to be downloaded.
3. Click **Archive Files** at the right bottom of the page to expand its property pane.
4. Click the Download button corresponding to the target format.
   If the Download button appears as , it means you have to wait until transcoding is completed in case the archive status is *Waiting* or *Transcoding*.
5. In the Save Files window that appears, set the download path, and click **Save**.

Modifying Archives

You can edit archives recorded by your own VRR or archives that you are authorized to modify.

To modify archive properties:

1. Click **Media>Archives** in the menu bar at the top of the page.
2. Either double-click the archive entry to be modified in the archives list, or click that item and click **Edit** in the *ACTIONS* area.
3. If you are authorized to modify the archive, you can modify settings for the following parameters in the Archive Properties page that appears:

Table 3-9 Archive Properties Description

Parameter	Description
Name	Specifies the name of the archive. **Note:** Only letters, figures, _, space or multi-byte characters can be used for the file name, and the length is 4-20 characters.
Enable PIN Code for Playback	Specifies whether to enable PIN code protection for the archive. If a PIN code is set, you must enter the correct PIN code to play the archive through an endpoint. After this option is selected, you should enter a PIN code consisting of 4-8 digits in **PIN Code**. **Note:** This option does not apply to playback through the Web UI.

Parameter	Description
Description	Specifies additional information related to the archive.
Create Priority	If this option is enabled, it has a higher priority when this archive is transcoded.

4 If you want to set a list of users who can view or modify the archive, click the *Allowed Users/Groups* tab.

Two lists display on the page. The upper one is a selection list that displays all local users created in the system. You can switch to group list by clicking the dropdown list at the top of the page.

The following list is the allowed list. All-user group (All_Users) and VRR owner are included in the allowed list for archives by default.

5 Either double-click an item to be allowed in the selection list, or click that item and click the **Add** button to add it to the allowed list. The newly added item is shown in the allowed list, and the already added items are identified by the icon in the user list.

— To delete an item from the allowed list, either double-click the item, or click the item and click the **Remove** button.

— To authorize a user to edit, check for that user in the allowed list.

Both add and delete operations support the Windows standard multiple-select operation.

6 Click **OK** to complete the setup.

Quick Code

A quick code will be generated automatically for every archive after the system completes a recording. The recorded videos saved in the system can be played back immediately without accessing the UI by using the remote control to dial the number with the quick code included.

The quick code is displayed in the Properties page of archives. Click **Media> Archives** in the Web Management page, and then double-click an archive. You can find the quick code in the pop-out page. The quick code cannot be changed.

When using the quick code to play back files, the dial-in number consists of the system IP address or the E.164 prefix and the quick code in the following format:

- If the system has been registered to a gatekeeper：**[RSS E.164 prefix][Quick Code]#**

  For example, if the E.164 prefix of Polycom® RSS™ 4000 system is 1234 and the quick code of the file to be played back is 567890, dial **1234567890#**

- If the system has not been registered to a gatekeeper：**[RSS IP address]##[Quick Code]#**

  For example, if the IP address of Polycom® RSS™ 4000 system is 10.1.2.3 and the quick code of the file to be played back is 567890, dial **10.1.2.3##567890#**

If the bandwidth at which a user endpoint is connected with Polycom® RSS™ 4000 is lower than the bandwidth originally used to create the archives, then the videos cannot be played back successfully on that endpoint's screen.

Live Streaming

Polycom® RSS™ 4000 system supports live streaming of video sources, such as live video conference or dual stream sent by endpoints or MCUs with a highest resolution of 720p and a maximum bandwidth of 4M. You can view meeting videos and the second channel of dual stream in real time by connecting to Polycom® RSS™ 4000 Web UI directly through network, without using endpoint devices. Those live streaming videos will be saved in the system.

Live streaming supports dual streaming rates, this allows you to choose the appropriate bandwidth to view video based on your network condition. For bandwidth settings, see *Defining a Template*.

Starting a Live Streaming

Make sure that live streaming has been enabled for the recording template you are using before starting live streaming. For details, see *Defining a Template*.

Procedure for starting a live streaming is the same as the one for starting recording. See *Dialing-in to a VRR to Start Recording* for specific steps.

You cannot pause during live streaming.

Viewing Live Streaming Information

If live streaming is in progress on the system, the current live streaming list displays on the Live Streaming page. Click **Media>Live Streaming** in the menu bar at the top of the page to enter the Live Streaming page.

On this page, ordinary users can only see the following two types of live streaming content:

- Live streaming performed by users' own VRR.
- Live streaming performed by the VRR for which the user has been added to the allowed list.

The live streaming list displays live streaming summary, such as live streaming name, owner, VRR number used, and creation time. You can also click a specific live streaming content to check its details in the *Live Streaming Details* area on the right side of the page.

Viewing Live Streaming Video

When the system starts live streaming, you can view the video being live streamed in real time on the Live Streaming page.

To view live streaming in progress:

1. Click **Media>Live Streaming** in the menu bar at the top of the page.
2. Select the live streaming content you want to view in the list, and then click the Play button in the *Live Streaming Details* area on the right side of the page. Windows Media Player opens to play the video.
   If the live streaming content uses two different bandwidths, two Play buttons with their bandwidths will display in this area, and you may choose the appropriate bandwidth to play based on your network condition.

Multicast

Polycom® RSS™ 4000 system supports the video multicast function and can send video streams to a group of computers at the same time. Users can play multicast videos by accessing the system's Web Management interface. Only the use of the Internet Explorer browser is supported.

Before you use the multicast function, make sure that this option has been activated by your system administrator, and that you have installed multicast controls in the browser. See *(Optional) Installing Multicast Controls*.

If using the Windows 7 operating system, you must log in as an administrator in order to successfully install the controls. Ordinary users cannot install multicast controls.

Multicast of an Archive or a Live Streaming Video

Users can start a multicast from the archives or the live streaming list. The system supports up to 20 concurrent multicast channels.

To start a multicast:

1. Click **Media>Archives** in the menu bar at the top of the page.
2. Select the archive for multicasting in the *Archives* page.
3. Click the button in the *Archive Details* area.

   When the button changes into , it indicates that this archive is undergoing multicast. To stop the multicast, click this button again to return it to .

To put a live streaming video into a state of multicast, Click **Media>Live Streaming** to enter the Live Streaming page, and then start the multicast (see the steps described above).

Viewing Multicast Video

All ongoing multicasts are displayed in the multicast list and will disappear after they end.

To view a multicast video:

1. Click **Media>Multicast** in the menu bar at the top of the page.
2. Select the video to be viewed from the multicast list.

Click **View Multicast** in the *ACTIONS* area on the left of the page. The system opens Windows Media Player automatically to play the video selected. Click **Stop Multicast** to stop the multicast of this video.

Ordinary users can only stop the multicasts they have started.
The system cannot perform cycling of multicast videos. The multicast will end automatically when the playing of the video ends.

4

Administrator Configuration

With full Web configuration management permissions, administrators can view all recordings and live streaming videos, configure all functions, and monitor and maintain the system. This chapter mainly introduces Web configurations designed for administrators. For ordinary users, see the Chapter *Ordinary User Configuration*.

By default, Polycom® RSS™ 4000 has one administrator, for which username and password are both **admin**. It is recommended that you change the default password after logging in to the system for the first time to prevent system intrusions.

Recording Templates

A template is used to define a set of basic recording link parameters, such as the bandwidth for recording and live streaming, MP4 resolution, and whether to live stream. All Virtual Recording Rooms (VRR) are created based on templates. Changing parameters of a template may change the corresponding recording policies of the VRR using that template.

A default template, named *Default_Template*, is built in the Polycom® RSS™ 4000 system. It is selected by default when the system is creating a VRR. You can modify the default template but cannot delete it.

Viewing Template Information

Click **VRR>Templates** in the top menu bar of the page to open the template page.

The page list shows the templates saved on the current system and associated summary information, including template name, primary channel and secondary channel bandwidths for recording and live streaming, MP4 resolution, whether to enable live streaming and the people and content layout when recording dual stream. If the list is longer than one page, you can either turn pages by clicking the button group at the top of the list or jump to a specific page by entering the corresponding page number in *Go to*.

In the list, you can search, sort and refresh those templates. For specific instructions, see *List Sorting, Searching, and Refreshing*.

Defining a Template

Different templates pre-define different recording link policies for a VRR.

To define a recording template:

1. Click **VRR>Templates** in the menu bar at the top of the page.
2. Click **Add** in the *ACTIONS* area on the left of the page.
3. In the new template page that opens you can configure the following parameters:

***Table 4-10** Defining Template Parameters*

Parameter	Description
Name	Specifies a unique name to identify this template.
Primary Recording and Streaming Rate	Specifies the maximum bandwidth to be used when recording and live streaming. The bandwidth used by an endpoint or MCU to connect to the Polycom® RSS™ 4000 should not be higher than the bandwidth defined here.
Secondary Recording and Streaming Rate	Specifies whether to use a secondary lower bandwidth for recording or live streaming, enabling video to be converted into two different bandwidths for users to choose the appropriate file to be played according to their network conditions. The bandwidth can be set in the range of 128-1024Kbps. Select **None** to indicate that a secondary bandwidth will not be used.
MP4 Resolution	Specifies whether or not to convert recorded files into MP4 format and the resolution after conversion. The converted files can be downloaded using the **Media->Archive** page. See *Playing Back and Downloading Archives*. Select **None** to indicate that the file will not be converted into MP4 format.
Video Quality	To be chosen based on the activity content of the input video: ▪ Motion – Give first priority to the motion in the record video. Accordingly the resolution may be lowered when the network bandwidth is low. It is best for recording people videos. ▪ Sharpness –Give first priority to the sharpness of the recorded video. Accordingly the frame rate may be lowered when the network bandwidth is low. It is usually used for recording content videos.
Video & Content Layout	Specifies the layout for displaying people and content videos when recording or live streaming dual stream. Users can choose from the following layouts: ▪ Dual window for content: Displays people and content videos respectively in dual window. This option does not apply to MP4 files ▪ Single window small content: Displays dual stream in a small split screen in a single window. ▪ Single window medium content: Displays dual stream in a medium sized split screen in a single window. ▪ Single window large content: Displays dual stream in a large split screen in a single window. ▪ Single window no content: Only displays people images without content. ▪ Single window video/content switch: Alternately displays people and content in a single window. When content is sent, the window displays content video. When no content is sent,

Parameter	Description
	the window displays people images.
Generate an MP3 audio file	Specifies whether to convert files into MP3 audio format after recording. If this option is enabled, the MP3 file icon appears in the archives in the list of format conversions after the recording ends. This option is often required to be enabled when recording an audio-only call. **Note**: Polycom® RSS™ 4000 does not support G.728AB or Siren 14 32K.
Live Streaming	Specifies whether to enable live streaming. If this option is enabled, the system will live stream videos sent from an endpoint or MCU, and users can view them in real time by connecting to the Web UI of the system. For information on live streaming, see *Live Streaming*.
Restrict the recording to CIF/SIF resolution	If this option is selected, the bandwidth will be restricted within the range of 1024Kbps. No matter what functions the endpoint has, calls made with this template will be recorded using CIF/SIF resolution.
Backup medias using this template to:	Specifies whether to specify a designated backup path on the FTP server for all files recorded with this template. This option is only available when users have configured an FTP server for data backup. (See *FTP Server Configuration*). If this option is selected, it is required to enter the path of the backup file in *Media Path*. Make sure your FTP server can identify this path. If no backup path is set in the template, archives will be backed up to the default path set in the **Admin> Data Backup/Restore** page.

4 Click **OK** to complete the setup.

The new template can be viewed in the template list.

Managing Templates

You can edit or delete a created template.

To edit or delete a created template:

1 Click **VRR>Templates** in the menu bar at the top of the page.

2 Click the template entry to be changed in the template list.

3 In the *ACTIONS* area on the left side of the page, click **Edit** or **Delete** to modify or delete the template.

When you delete a user-defined template, all VRRs using that template will be automatically changed to use the default template. However ongoing recording performed by these VRRs will not be affected.

Virtual Recording Room (VRR)

A Virtual Recording Room (VRR) is created based on recording templates. It defines various recording-related parameters, which are the basis of all kinds of recordings. A VRR is identified by digits, and you can directly start recording using specified VRR parameters by adding the VRR number to the dial-in number.

A default VRR, named Default_VRR, is built in the system. When an endpoint or MCU tries to connect by directly dialing Polycom® RSS™ 4000 system IP address or E.164 prefix, default VRR parameters will be used for recording. You can modify the default VRR but cannot delete it.

Defining a VRR

You can pre-define a variety of record types for each recording by defining the VRR, to avoid over and over configuring the same recording parameters.

To define a VRR:

1. Click **VRR>VRRs** in the menu bar at the top of the page.
2. Click **Add** in the *ACTIONS* area on the left of the page.
3. In the new VRR page that appears, configure the following parameters (* indicates mandatory parameters):

Table 4-11 Defining VRR Parameters

Parameter	Description
VRR Name	Specifies a unique name to identify the VRR. You can also use the default name generated by the system.
Use a Custom Name Prefix for the archive file name (Name Prefix+Date+Time)	Specifies whether to assign a name prefix for the file recorded with this VRR. The user can organize and identify a large number of recorded files conveniently with a custom name prefix. If this option is selected, enter the name in *Custom Name Prefix*. The system will automatically generate the file name in the following format according to the custom name and the date and time: Custom Name_Date_Time_Random Number. **Note:** Only letters, figures, _, space or multi-byte characters can be used for the name prefix, and the length is 4-20 characters.
VRR Number	Specifies a number to identify the VRR. You can directly dial the VRR to record by adding the VRR number when dialing the Polycom® RSS™ 4000 system. The number you entered must be unique and comprised of 4-8 digits. You can also use the number automatically generated by the system.
Owner	Specifies the owner of this VRR. The default owner is admin. In addition to the administrator, only the VRR owner can view and modify VRR parameters. **Note:** Each VRR must belong to a user. If the user is deleted, all VRRs owned by that user will be automatically deleted.

Parameter	Description
Channel	Specifies the VRR channel. A channel is used to classify a large number of videos when the Polycom® RSS™ 4000 is integrated with Polycom Video Media Center™ (VMC) 1000 V2.0.
Template	Specifies the VRR template. The template defines the basic recording link parameters. The default template is selected by default.
Enable PIN Code for Playback	Specifies whether to enable PIN code protection for the archive. If a PIN code is set, you must enter the correct PIN code to play the archive through an endpoint. After this option is selected, you should enter a PIN code consisting of 4-8 digits in **PIN Code**. **Note:** This option does not apply to playback through the Web UI.
Recording Immediately	If this option is selected, the system will immediately start recording once you connect to the VRR. If deselected, you may need to manually start recording through the Web UI or the endpoint interface.
Email Notification	If this option is selected, once the VRR recorded video has completed its format conversion and is ready for viewing, the system will send an Email message to the address set here.
Default Recording Description	If necessary, you can enter additional VRR information, such as the owner and usage, in order to improve identification and classification management when there are many VRRs.

4 (Optional) Click the **Allowed User/Groups** tab to set allowed list for that VRR. Users and groups defined in the allowed list can view or modify VRR recorded files or live streaming. For user and group settings, see *User Management*.

Two lists display on the page. The upper one is a selection list that displays all local users created in the system. You can switch to group list by clicking the dropdown list at the top of the page.

The lower part of the list is the allowed list. By default, the VRR created by an administrator has a group named All_Users in its allowed list. That means all users are allowed to view recorded files and live streaming.

5 Either double-click an item to be allowed in the selection list, or click that item and click the **Add** button to add it to the allowed list. The newly added item is shown in the allowed list, and the already added items are identified by the icon in the user list.

— To delete an item from the allowed list, either double-click the item, or click the item and click the **Remove** button.

— To authorize a user to edit, check for that user in the allowed list.

Both add and delete operations support the Windows standard multiple-select operation.

6 Click **OK** to complete VRR configuration.

- Once a VRR is created, the VRR owner is automatically added to the allowed list and authorized to view and edit.
- Administrators are not limited by the allowed list, and have always permissions to view and edit VRR recorded files or live streaming.

Dialing-into a VRR to Start Recording

You can start recording using a user-defined VRR in one of the following two ways: directly dialing in the VRR through an endpoint remote control or dialing out from VRR using the Web Management page to connecting the endpoint.

To dial in VRR through an endpoint's remote control:

- If the Polycom® RSS™ 4000 and the endpoint are both registered to a gatekeeper, the dial-in number is **[RSS E.164 suffix][VRR number]**.
  For example, if the Polycom® RSS™ 4000 E.164 is 1234 and your VRR number is 1000, you may dial "12341000".
- If the network is not configured with a gatekeeper, the dial-in number is **[RSS IP address]##[VRR number]**.
  For example, if the Polycom ® RSS™ 4000 IP address is 172.21.110.2 and your VRR number is 1000, you may dial "172.21.110.2##1000".

To dial-out from VRR using Web Management page:

For detailed instructions, see *To start recording from the Web UI* in the section *Starting a Recording*.

When recording by connecting to the Polycom® RSS™ 4000 system using a MCU recording Link function, you can specify the VRR to be used by adding the VRR number when configuring the Polycom® RSS™ 4000 system's E.164 number on the MCU. For instance, if the E.164 prefix of the Polycom® RSS™ 4000 system is 123 and the number of the VRR to be used is 456, you can enter 123456. If the network is not configured with a gatekeeper, only the default VRR can be used in the recording link initiated by MCU.

Managing VRRs

An administrator can edit or delete a created VRR.

To edit or delete a created VRR:

1. Click **VRR>VRRs** in the menu bar at the top of the page.
2. Click the VRR entry to be edited in the VRR List.
3. In the *ACTIONS* area on the left side of the page, click **Edit** or **Delete** to modify or delete the VRR.

Channel

You can customize video channels on the Polycom® RSS™ 4000 to classify videos according to subjects. When integrated with Polycom Video Media Center™ (VMC) 1000 V2.0, videos recorded on the Polycom® RSS™ 4000 can be imported into VMC and classified according to their channels, to facilitate on-demand business management.

A default channel, named *Default_Channel* is built in the system. You cannot change its name or delete it.

To setup a channel:

1. Click **VRR>Channels** in the menu bar at the top of the page.
2. Click **Add** in the *ACTIONS* area on the left of the page.
3. In the add channel page, enter the channel category name, and any additional related information if necessary.
4. Click **OK** to complete the setup.

To edit or delete a created channel:

1. Click **VRR>Channels** in the menu bar at the top of the page.
2. Click the channel entry to be edited in the channel list.
3. In the *ACTIONS* area on the left side of the page, click **Edit** or **Delete** to modify or delete the channel.

Once a channel is deleted, VRRs belonging to that channel are automatically changed to belong to the default channel.

Recording Setting

Recording Setting page provides supplementary settings for recording. You may need to configure these options, if needed.

To configure recording setting options:

1. Click **System Config>Recording Setting** in the menu bar at the top of the page.
2. On Recording Setting page, configure the following parameters:

Table 4-12 Defining Recording Setting Parameters

Parameter	Description
Continue recording if no resource for live streaming	If this option is selected, the system which is in live streaming mode will automatically switch to recording mode in case of insufficient resources. In this case, you cannot continue to view the video in real time through the Web. However, you can play back the video once recording and format conversion are completed by the system. If deselected, the system will reject all live streaming requests when there is no live streaming resource.

Parameter	Description
Enable 1080p H.323 recording with live streaming	Specifies whether to enable the 1080p capability of the system for recording with live streaming.
FF/RW interval	Specifies the fast forward/backward intervals when playing back recorded files on an endpoint. For example, if it is set to 1 minute, the system will set one node every minute when recording. When pressing the Fast forward button, the video playback will jump to the nearest node content from the current location.

3 Click the **Update** button.

Archives

The administrator can view and modify all recorded files currently archived by the system through the Web UI, and delete and re-transcode archives. For operation descriptions of viewing, playing back and downloading archives as well as modifying properties of archives, see *Ordinary User Configuration* in Chapter *Archives*.

Re-transcoding Archives

For archives which have already been saved in the page, the administrator can re-transcode them. The re-transcoding can be performed in accordance with the current parameters of VRRs used by the archives.

Re-transcoding is not allowed when the archive is in the process of being transcoded.

To re-transcode archives:

1 Click **Media>Archives** in the menu bar at the top of the page.
2 In the archives list, select the file to be re-transcoded.
3 Click **Recreate Archives** at the bottom right side of the page.
4 The existing files will be deleted after the file re-transcoding starts. Click **Yes** to confirm the re-transcoding.

When the Play button appears in *Archive Details* area on the right side of the page, it indicates that the re-transcoding of files has been completed.

Live Streaming

For description of the live streaming function, see *Ordinary User Configuration* in Chapter *Live Streaming*. The administrator can view all ongoing live streaming videos.

Live Streaming Resources Usage

The number of resources supported by the Polycom® RSS™ 4000 system for live streaming the video depends on the system model you purchased. The following table shows the relationship between the model and the resources it supports.

Table 4-13 Device model and live streaming resources

Model	Resources Required
Small	4
Medium	6
Large	8

The combination of frame rate, resolution, number of rates used and video layout affects the number of resources required on the Polycom® RSS™ 4000 system to support live streaming. For information about setting the rates and the video layout, see *Defining a Template*. The following table shows the relationship between those aspects and the amount of resources that are used.

Table 4-14 Live streaming resources usage

Recording with Live Streaming Properties				Resources Required
Recording Resolution (People Video)	**Live Streaming Resolution (WMV File)**	**Rates Used**	**Video Layout**	
CIF/4CIF/720p 30 fps	CIF/4CIF/720p 30 fps	1	Single Window	1
			Dual Window	2
		2	Single Window	2
			Dual Window	4
1080p 30fps/ 720p 60 fps	720p 30 fps	1	Single Window	2
			Dual Window	3
		2	Single Window	3
			Dual Window	5

Referring to the above table, you can easy calculate the number of live streams supported by the system in concrete scenarios. Take a Small model system that supports four resources. If there is an ongoing live streaming sending video at 720p 30 fps and recording video at 1080p 30 fps/720p 60 fps, using two rates and single window layout, it occupies three resources on the system. Then there is one resource free, which allows for running one live stream at CIF/4CIF/720p 30 fps, using a single rate and single window layout concurrently.

The following table shows the maximum capacity of the Polycom® RSS™ 4000 systems when perform the live streaming of different parameters:

Table 4-15 Live streaming maximum capacity

Recording with Live Streaming Properties				Maximum Capacity		
Recording Resolution (People Video)	**Live Streaming Resolution (WMV File)**	**Rates Used**	**Video Layout**	**Small**	**Medium**	**Large**
CIF/4CIF/ 720p 30 fps	CIF/4CIF/ 720p 30 fps	1	Single Window	4	6	8
			Dual Window	2	3	4
		2	Single Window	2	3	4
			Dual Window	1	1	2
1080p 30fps/ 720p 60 fps	720p 30 fps	1	Single Window	2	3	4
			Dual Window	1	2	2
		2	Single Window	1	2	2
			Dual Window	0	1	1

Multicast

Polycom® RSS™ 4000 system supports the multicast function and can perform the one-to-many transmission of video streams. The system only needs to send the video streams once so that multiple computers can simultaneously share live streaming or recorded videos, so as to greatly reduce the demand for transmitting network video streams and save the network bandwidth.

Polycom® RSS™ 4000 supports the simultaneous multicast of up to 20 channels.

To use the multicast function successfully, the following conditions are required to be met:

- The multicast function is activated in the Polycom® RSS™ 4000 system. The multicast function is optional. It is available only after you purchase the license for this function and the system is activated. Please contact your supplier to obtain this function.
- Multicast controls are installed on the computer to receive the multicast. See *(Optional) Installing Multicast Controls*.
- Routers and switches in the network of client computers are configured correctly to support the IP multicast communication with Polycom® RSS™ 4000 system.

Configuring Multicast

Before you use the system to perform the multicast, it is necessary to configure parameters on the Multicast page.

To configure multicast parameters:

1. Click **System Config>Multicast Setting** in the menu bar at the top of the page.
2. On the *Multicast Setting* page, configure the following parameters:

Table 4-16 Description of Multicast Setting Parameters

Parameter	Description
Auto Multicast for Live Streaming	If this option is selected, when there is a live streaming started, the system will also multicast the live video automatically at the same time.
Multicast IP Pool Starting Address	Specifies the initial IP address of the multicast address pool. The system will use 20 consecutive addresses starting with this address to perform the multicast. Make sure the address pool entered is within the range of 233.0.0.0 to 238.255.255.236.
Multicast Port	Specifies the multicast port. All multicast video streams use the same port as set here.

Multicast Operation

For how to start and stop the multicast and how to view multicast videos, see *Ordinary User Configuration* in Chapter *Multicast of an Archive or a Live Streaming Video*. While multicast operations are roughly the same for the administrator and ordinary users, the difference is that the administrator can stop all ongoing multicasts and ordinary users can only stop the multicasts which they have started.

Network Service

IP Setting

On the IP Setting page, you can configure parameters to be used for network communication, including system IP address, DNS server, NAT server and speed/duplex modes for LAN ports.

To configure LAN port parameters:

1. Click **System Config>IP Setting** in the menu bar at the top of the page.
2. On the IP Setting page, configure the following parameters:

Table 4-17 IP Setting Parameters Description

Parameter	Description
Obtain an IP Address Automatically (DHCP)	If the user network is configured with a Dynamic Host Configuration Protocol (DHCP) server, select this option to automatically obtain the IP address.
Using the following IP Address	Select this option to use the static IP address. You need to manually enter the IP address, subnet mask, and gateway IP address.
Obtain DNS Server Address Automatically	Used in combination with the DHCP option. When the *Obtain an IP Address Automatically (DHCP)* option is selected, the system will automatically obtain DNS server address from a DHCP server in the network.
Using the following DNS Server Address	If you did not select the option to automatically obtain DNS address, you must enter the preferred/alternate DNS server addresses here for the system to resolve domain names.
Using the following NAT Server	The Network Address Translation (NAT) function of the system enables you to translate the private network IP address of packet into a public network IP address before transmission. To enable NAT, select this check box and then enter the public network IP address to be displayed publicly.
LAN Speed	Sets the speed/duplex modes for LAN ports. Supports the 10/100M Full Duplex or Half Duplex mode and the 1000M network. Select *Auto* to use auto-negotiation. **Note:** When setting LAN port speed, contact your network administrator to ensure that the switch link rate matches the system port.

3 Click **Update** and a dialog box will pop up, in which you should confirm to restart the system to apply the setting.

Gatekeeper

If the system is configured to use a gatekeeper, you can use a static alias rather than an IP address that changes from day to day to perform dialing.

To configure the system to use a gatekeeper:

1 Click **System Config>Signaling Setting>Gatekeeper** in the menu bar at the top of the page.

2 Set the following parameters in the gatekeeper page:

Table 4-18 Gatekeeper Parameters Description

Parameter	Description
Register to Gatekeeper	Indicates whether or not to register to the gatekeeper. You must check this option to set the following parameters.
Primary (Alternate) Gatekeeper	Indicates whether the system has been registered to the primary (or alternate) gatekeeper. **Note**: The alternate gatekeeper will only be used when the primary gatekeeper is not available.

Parameter	Description
Gatekeeper IP Address	Specifies the IP address for the primary (or alternate) gatekeeper.
Gatekeeper Port	Specifies the port number for the primary (or alternate) gatekeeper.
System Prefix/E164.	Sets the E.164 number for the system.
System H.323Alias	Sets the H.323 alias for the system.

3 Click **Update** and a dialog box will pop up, in which you should confirm to restart the system to apply the setting.

QoS

Quality of Service (QoS) is very important in transmission of high-bandwidth audio and video data. You can use QoS to test and guarantee the following parameters:

- Average packet delay
- Delay variation (jitter)
- Error rate

To specify QoS parameters:

1 Click **System Config>Signaling Setting>QoS** in the menu bar at the top of the page.

2 On the QoS page, configure the following parameters:

Table 4-19 QoS Parameters Description

Parameter	Description
Enable QoS	Select this option to enable configuration of the QoS settings. When un-checked, the system uses the default QoS settings.
Type	**DiffServ** and **Precedence** are two methods for encoding packet priority. The priority set here for audio and video packets should match the priority set in the network routers. ▪ Differv: Select when the network router uses Differv for priority encoding. If this option is selected, enter values in the Audio and Video fileds. The value range is 0-63. **Note:** If you select DiffServ but your router does not support this standard, IP packets queue on the same communication links with data packets. This non-prioritized queueing greatly increases the latency and jitters in their delivery and can negatively impact performance. ▪ Precedence: Select this option when the network router uses Precedence for priority encoding, or when you are not sure which method is used by the router. Precedence should be matched with None in the Tos field. The value range is 0-5. If this option is selected, enter values in the Audio and Video fields. The value

Parameter	Description
	range is 0-5. **Note:** Precedence is the default mode as it is capable of providing priority services to all types of routers and is currently the most common mechanism.
Audio / Video	Specify the priority for audio and video IP packets. The recommended priority is 4 for audio and video to ensure that the packet delay for both is the same, that audio and video packets are synchronized, and to ensure lip and audio synchronization (lip sync).
ToS	Select the Type of Service (ToS) that defines optimization tagging for routing the conference audio and video packets. ▪ Delay: The recommended default for video conferencing; prioritized audio and video packets tagged with this definition are delivered with minimal delay. ▪ None: No optimization definition is applied. This is a compatibility mode in which routing is based on Precedence priority settings only. Select None if you do not know which standard your router supports.

3 Click **Update** and a dialog box will pop up, in which you should confirm to restart the system to apply the setting.

User Management

User

Users who are defined in the Polycom® RSS™ 4000 system can log in to the Web Management pages to complete authorized operations. The system supports two user levels:

- User: Who can only view and edit limited pages, including:
  - Personal settings
  - Password modification (local user only)
  - Owned VRR
  - Archives and live streaming recorded by the owned or authorized VRR
  - Authorized archives
- Administrator: Who can perform all operations, and can view and configure all pages.

If the system is configured with an Active Directory (AD) server, users defined on the AD can log in to the Polycom® RSS™ 4000 system as ordinary users. When logging in to the system for the first time, AD users are automatically added to the user list in the Polycom® RSS™ 4000 system.

By default, Polycom® RSS™ 4000 has one administrator, for which username and password are both **admin**. It is recommended to define different user management permissions as required, and change the administrator's default password to prevent system from invasions.

Viewing Users

Click **User>Users** in the menu bar at the top of the page to enter Users page. Users page displays a list of defined users in the current system and associated summary information:

Table 4-20 Description for User List Information

Parameter	Description
User ID	User ID used for Web login.
Full Name	User full name.
Domain	User domain. LOCAL indicates that the user is a local user created in the system.
Role	User roles: Administrator or User. Different roles determine the user operation permissions after logging in to pages.
Status	A user can have four different statuses: ▪ Active: User status is active. User can log in to the system. ▪ Disable: User status is disabled. User cannot log in to the system. ▪ Locked: User status is locked. User cannot log in to the system. If a user failed to login for a set condition, that user is locked by the system automatically. And the user cannot log in to the system until lock has timed out or the administrator has changed the status to Active manually. For more information, see *Security Policy*. ▪ Inactive: User status is inactive. User cannot log in to the system. If a user does not log in to the system for a set period of time, that user status automatically switches to Inactive. User cannot log in to the system until the administrator has changed the status to Active manually. For more information, see *Security Policy*.
Description	Additional user information.

In the list, you can search, sort and refresh users. For specific instructions, see *List Sorting, Searching, and Refreshing*.

Adding a New User

You can add a local user to the system or import users from an AD server to the system for management if the system is successfully configured with AD server.

To add a local user:

1. Click **User>Users** in the menu bar at the top of the page.
2. Click **Add Local User** in the *ACTIONS* area on the left side of Users page.
3. Configure the following parameters on Add Local User page (* indicates mandatory options):

Table 4-21 Local User Parameters Description

Parameter	Description
User ID	Specifies the user ID used for Web login. User ID must be unique with a length of 1-128 characters, and consist of alphanumeric or "_" symbol characters. Once created, user ID cannot be modified.
Full Name	Specifies the user's full name.
Password	Specifies the login password.
Confirm Password	Specifies the confirm password which must be identical to the login password.
Role	Specifies the user role: Administrator or User. Different roles determine the user operation permissions after logging in to pages. Once created, the user role cannot be modified.
Description	Specifies additional related information.

To import an AD user:

1. Click **User>Users** in the menu bar at the top of the page.
2. Click **Import AD User** in the *ACTIONS* area on the left side of Users page.
   This button displays only when the system has been successfully configured with AD server.
3. On the *Import AD User* page, select a user from the list, and then click **OK**.
   You can click the button on that page to refresh the list, or enter username in the text box to start a search.
   The standard Windows keyboard operations are supported, so you can add multiple users at a time.

As a new user is added, the system automatically creates a VRR owned by that user, and it can be viewed by entering the VRR>VRRs Page.

Managing Users

Administrator can modify local user information and password, or delete user. For an AD user, the administrator can only edit user status or delete that user.

To modify user information:

1. Click **User>Users** in the menu bar at the top of the page.
2. Select the user entry to be modified in the user list.
3. Click **Edit** in the *ACTIONS* area on the left side of the page.
4. On the Edit User page, set the user's full name, additional information and status, then click **OK**.

If the user is an AD user, you can only modify its status.

To modify user password (local user only):

1. Click **User>Users** in the menu bar at the top of the page.
2. Select the user entry to be modified in the user list.
3. Click **Set Password** in the *ACTIONS* area on the left side of the page.
4. On the *Set User Password* page that appears, enter the new password and confirm password, then click **OK**.

After the password is changed by administrator, the user will be required to change his password when he logs in the system using that password the administrator set.

To delete a user:

1. Click **User>Users** in the menu bar at the top of the page.
2. Select the user entry to be modified in the user list.
3. Click **Delete** in the *ACTIONS* area on the left side of the page.

After a user is deleted, all VRRs owned by that user are automatically deleted, and the recorded archives owned by that user are automatically assigned to the default administrator.

Groups

A group is a collection of pre-defined users. With the Group function, you can conveniently set permissions for a group of users. By using Group, you can add multiple users at a time when setting the view permission for VRRs, recorded files or live streaming videos.

A default group, named All_Users, is built in the system. It includes all the users defined in the Polycom® RSS™ 4000 system. All_Users group cannot be modified or deleted.

Click **User>Groups** in the menu bar at the top of the page to enter the Group page. Group page displays a list of defined groups in the current system and associated summary information, such as the group name, the domain which the group belongs to, a description and the number of members included in the group. Administrators can define a new group, modify or delete existing groups on this page.

Creating a New Group

To create a new user group:

1. Click **User>Groups** in the menu bar at the top of the page.
2. Click **Add** in the *ACTIONS* area on the left side of the Group page.
3. On the *Add Local Group* page that appears, specify a name for the group to be created. The group name must be unique. You can enter associated descriptions if necessary.

4 Click the **Group Members** tab to add group members.

The list at the top of the page displays all the users defined in the current system. Select users to add to the group, and then click the **Add** Button. Added users appear in the group member list, and are identified by the icon in the user list.

— You can delete an item either by double-clicking that item in the group member list, or by clicking that item and then clicking the **Remove** button.

— Adding multiple users at a time by using the standard Windows keyboard operations is supported.

Managing Groups

To modify or delete an existing group:

1 Click **User>Groups** in the menu bar at the top of the page.

2 Select the group entry to be deleted in the group list.

3 In the *ACTIONS* area on the left side of the page, click **Edit** or **Delete** to modify or delete the group.

Service Setting

Active Directory

Polycom® RSS™ 4000 supports integration with an Active Directory server. After integration, users in the Active Directory domain can access the Web Management pages of the Polycom® RSS™ 4000 directly as ordinary users without needing to be registered in the Polycom® RSS™ 4000.

To configure an Active Directory server:

1 Click **System Config>Security Setting>Active Directory** in the menu bar at the top of the page.

2 Configure the following parameters on the Active Directory page:

Table 4-22 Active Directory Parameters Description

Parameter	Description
Integrate with Active Directory Server	Defines whether to integrate the Polycom® RSS™ 4000 with an Active Directory server. Once this option is enabled, you can configure specific parameters.
Active Directory Server	Sets the IP address or domain name of the Active Directory server to be integrated. **Note:** If you set a domain name, make sure you have already set a DNS server address that can resolve this domain name in **System Config>IP Setting**.
User Name	Sets the user name that will be used by the Polycom® RSS™ 4000 to access resources on the Active Directory server.

Parameter	Description
User Password	Sets the user password that will be used by the Polycom® RSS™ 4000 to access resources on the Active Directory server.

3 Once set up is complete, click **Update**.

After configuring the Active Directory server successfully, the configured Active Directory server domain name displays in the *Domain* drop-down list of the system's Web Login page.

Then, you can select the appropriate domain in the drop-down list, and use existing users in the domain to log in directly. When logging in to Polycom® RSS™ 4000 Web Management pages using an existing domain user, the user gets only ordinary user permissions.

Calendar Configuration

Polycom® RSS™ 4000 system can be integrated with Microsoft Exchange Server 2007, and work with other Polycom video conferencing devices to record or live stream conferences when scheduling conferences through Outlook.

To configure mail server information in Polycom® RSS™ 4000:

1 Click **System Config>Service Setting>Calendar Configuration** in the menu bar at the top of the page.

2 Configure the following parameters on the *Calendar Configuration* page:

Table 4-23 Calendar Configuration Parameters Description

Parameter	Description
Enable Calendar Integration	Sets whether to enable the calendar integration function. You can configure related parameters only when this option is enabled.
Exchange server address	Specifies the address or domain name of the Exchange server to be integrated. **Note:** If you set a domain name, make sure you have already set a DNS server address that can resolve this domain name in **System Config>IP Setting**.
Calendar mailbox user ID	Specifies the Email account ID allocated to the video conferencing system by the Exchange server. This ID should be the same as the ID used by the Polycom RMX or DMA.
Password	Specifies the password corresponding to the account ID.

Viewing Outlook Conference Archives

When scheduling conferences through the Outlook's calendar, if a conference has been set to be recorded or live streamed, the conference invitation message that participants receive would display a URL address that can be used to view the conference after it has been recorded or live streamed. Click the link to open the Polycom® RSS™ 4000 login page, log in to directly

enter the Archive page or Live Streaming page for the recorded file in Polycom® RSS™ 4000 system, then click the Play button on that page to view the video content.

If the recorded conference is a recurrent conference, the page displays other links to be used to access all the recorded conferences under that conference series.

By clicking **Outlook Meeting** on the right side of the page, you can view recorded conference information. The table below explains detailed meanings of these parameters:

Table 4-24 Outlook Meeting Information Description

Parameter	Description
Subject	Conference subject.
Start Time	Conference start time.
End Time	Conference end time.
Participants	Conference participants.
Organizer	Conference organizer.
VMR Name	Conference Virtual Meeting Room (VMR) name, a unique identification that is automatically generated by the Polycom DMA system based on the time the conference was created on the Outlook. All conferences under a periodic conference series share the same VMR name.
Related Archives	It is used for recurrent conferences, displaying the number of recorded conferences under that conference series. You can click **View** to filter all recorded conferences under that series in the list.
Related Streams	It is used for recurrent conferences, displaying the number of conference live streaming videos in progress under that conference series.
Play URLs	Lets you copy the URL of playing the archive to the clipboard. For archives recorded in two different bandwidths, clicking the *Copy* link will copy two URLs.

System Monitoring

Dashboard

The Dashboard is the default page displayed to administrators after they log in to the Polycom® RSS™ 4000 system. It shows any system status information relevant to administrators. Information panes can be expanded or hidden by clicking headings. Information displayed on the Dashboard will be updated in real time based on changes made to system data.

You can also navigate to this page by clicking **Admin>Dashboard** in the menu bar at the top of the page.

Signaling Connection

Shows connection information and recording status of endpoints or MCUs which currently dial and set up connections with the system. Click the >> button to expand detailed parameters information. The table below provides parameters descriptions.

Table 4-25 Parameters Description for Signaling Connection Information

Parameter	Description
IP	The IP address for the device connected to the Polycom® RSS™ 4000.
H.323/E.164	Displays the H.323 alias or E.164 prefix for the device to connect to the Polycom® RSS™ 4000 if it is registered to a gatekeeper.
VRR Number	The VRR number used by the connection.
Audio Type	The audio protocol used by the connection.
Video Type	The video protocol used by the connection.
Status	Shows the connection current status: recording, paused recording, playing back or idle.
Live Streaming	Shows whether the connection is performing live streaming. If live streaming is in progress, ✔ is displayed, or else ✘ is displayed.

You can control the recording of H.323 connection via the control button on the page:

- : Starts recording/live streaming. Displays when the connection status is idle or paused recording.
- : Pauses recording. Displays when the connection status is recording.
- : Stops recording/live streaming. Displays when the connection status is recording.
- : Disconnects H.323 connection.

You can dial out to connect the endpoint to record via the **Dial out to record** button on the page. For details, see *Start Recording from the Web UI in Starting a Recording*.

Web View Sessions

Shows the real- time session information of video on demand via the Web. The table below provides parameters descriptions.

Table 4-26 Parameters Description for Web View Sessions

Parameter	Description
Client IP	The IP address of the client computer which is playing the video.
Ports	The port used for playing the video.

Parameter	Description
Name	The name of the video which is being played.
Band Width	The bandwidth of the video which is being played.
Type	Shows the type for the video which is being played: archive or live streaming.

System Alerts

Shows the system alert information. When there is a system alert, a floating message may also appear at the right bottom of the page.

Web Connections

Shows information about all users connected to the Polycom® RSS™ 4000 Web interface, including their ID, roles, connecting time and IP addresses, and counts login users by roles, so that administrators can easily determine login statuses for current users. Click the corresponding of a user to disconnect it.

System Information

Displays following system basic information:

- System name
- The current version of the software running on the system
- The hardware version of the system
- The address and speed/duplex modes for LAN ports
- The maximum number of recording ports and live streaming ports supported by the system
- The maximum number of Web streaming sessions that are supported.
- The activation statuses of the charged options

Hardware Status

Displays the hardware status of the system, including status information about CPU, memory usage, fan, DSP and so on. If the hardware is in abnormal status, the font in the status bar appears in red.

Gatekeeper Status

Displays the status of the gatekeeper to which the system is currently registered. If successfully registered to the gatekeeper, system E.164 prefix and H.323 alias will display here.

External Server Status

The system can be integrated with external servers, such as FTP, Active Directory and Exchange server. External server status indicates the connection status between the system and the server. The meaning of each status is as follows:

- Not Configured: The server is not configured

- Account Error: Error configuring registration account information
- Connected: The server has been successfully connected to the system
- Connect failed: Failed to connect the system to the server

Last Login Information

Displays the last login information on the Polycom® RSS™ 4000 system, including the login time, user address, failed login information and so on.

System Logs

Polycom® RSS™ 4000 provides the function of backing up logs in the background. Log files are used for administrators to perform fault detection on the system.

Click **Admin>System Logs** in the menu bar at the top of the page to enter the Log page. On this page, you can check log files summary information, such as file size and creation time, or download and refresh system log files. The maximum space occupying capacity for logs is 10G. Once filled, the new logs will overwrite the old logs.

To refresh logs:

➢ Click Refresh in the *ACTIONS* area on the left of the Log page.

To download log files:

1. On the Log page, select the log to be saved.
2. Click **Download** in the *ACTIONS* area on the left side of the page.
3. In the Save Files dialog box that appears, select the file save path, and then click **Save**.

Hard Disk Warning

Administrators can set the system to display warning information once the free hard disk space reaches a certain threshold.

To set a hard disk warning threshold:

1. Click **Admin>Disk Warning** in the menu bar at the top of the page.
2. On the Hard Disk Warning page, set a disk space threshold. You can set a value in the range of 1-50G. The system will send an Email message to the administrator once the free hard disk space equals this threshold.

System Security

Certificate Setting

The Polycom® RSS™ 4000 Web server supports Security Socket Layer (SSL) protocol. After the SSL digital certificate is installed in the system, you can set up the encrypted communication connection between the user client and server, in order to ensure security of the transferred data during Web communication.

To Configure SSL certificate for the system, you can follow three steps as below:

1 Create a new certificate request
2 Apply for the certificate
3 Upload the certificate to the Polycom® RSS™ 4000 server

To create a new certificate request:

1 Click **System Config>Security Setting>Certification Setting** in the menu bar at the top of the page.
2 Click **Create New Certificate Request** in the Certificate Setting page.
3 Configure the following parameters in the SSL Configuration page:

Table 4-27 New Certificate Parameters Description

Parameter	Description
Common Name(CN)	Common certificate name.
Organization Name(O)	Name of the organization that issues the certificate.
Organization Unit(OU)	Unit of the organization that issues the certificate.
Locality Name(L)	Locality or city to which the certificate is applicable.
State Name(SN)	State or city/autonomous region to which the certificate is applicable.
Country (C)	Code of the country that issues the certificate.
Key Size	Key size, defaulted to 512 digits. You can select 1024 digits or 2048 digits as needed.
Challenge Password	Certificate request challenge password, which can further strengthen security of the certificate request.

4 Click **OK** to complete certificate request creation.

To apply for the certificate:

1 Click **View Last Certificate Request** in the certificate setting page to view the information about certificate request created.
2 Copy the information in the text box to the certificate application page of the certificate issuing organization from which you purchased service. The information will be used to generate a certificate.

To upload the certificate to the server:

1 After obtaining the certificate successfully, click **Open** in the Certificate Setting page.
2 Select the saving path of the certificate file in the popup dialog box for uploading files, and click **Open**.
3 Click **Upload** button in the Certificate Setting page to upload the certificate to Polycom® RSS™ 4000 system.

Click **View Certificate Information** to view information on the certificate installed in the system.

After installing the certificate you purchased, the browser will not show alert about website security certificate problems when you log in to the system. Instead, you will be directly linked to the login page of the system.

Ports

The port on Port page used to set firewall to allow H.323 call.

To configure the port:

1. Click **System Config>Security Setting>Ports** in the menu bar at the top of the page.
2. Configure the following parameters on the *Ports* page:

Table 4-28 Port Parameters Description

Parameter	Description
Fixed Ports for H.323	Specifies whether to define the TCP and UDP ports. ▪ Leave this check box clear if you are defining a Network Service for local calls that does not require configuring a firewall to accept calls from external entities. When this option is not selected, the system uses the default port range. ▪ If the firewall is incompatible with H.323, enable this setting and specify the TCP and UDP port ranges.
TCP/UDP Ports	Shows the default TCP/ UDP port range. The user can set the start port number here, and the end port number will be calculated automatically.

3. Click **Update** and a dialog box will pop up, in which you should confirm to restart the system to apply the setting.

Security Policy

Polycom® RSS™ 4000 system provides detailed security policy settings. You can define login times, password validity period, complexity of password setting, maximum visiting duration and so on to ensure the security of Web management.

To set security policy:

1. Click **System Config>Security Setting>Security Policy** in the menu bar at the top of the page.
2. Configure the following parameters on the *Security Policy* page:

Table 4-29 Security Policy Description

Parameter	Description	
Account Management	Inactive Time for Locking Account	Sets a validity period for a user account that is not used for a long time. If the user keeps his/her account unlogged for the time set, the account status will turn to *Inactive* and cannot be used to log in to the system until the administrator enters **User>Users** page and changes the status to *Active*.

Parameter	Description	
	Failed Login Lockout Threshold	Specifies times of failed login; it is used in combination with the following two options. If the times of successive failed login reaches the value within the time set in the *Failed Login Lockout Window* item, the system will lock the account and keep the status for the time set in the *Failed Login Locked Duration* item. While locked, the account status shows as *Locked*, which means that the user cannot log in until administrator enters the **User>Users** page and changes the status to *Active*.
	Failed Login Lockout Window	Specifies the time within which the times of failed login is calculated.
	Failed Login Locked Duration	Specifies the duration of the locked status of the account. If you select *Indefinite Lockout* option, the account will be locked indefinitely, and it cannot be used to log in until the administrator enters the **User>Users** page to change the status to *Active*.
Session Management	Session IDLE Timeout	Specifies the idle time of the system. If you do not perform any operation for the time set here, you automatically exit the system and need to re-log in. The maximum time can set to be 60 minutes.
	Session Maximum Duration	Specifies the maximum time within which you can perform operations. When this time is reached, you are automatically disconnected and need to relog in. The maximum time can set to be 480 minutes.
	Session Maximum Number Per User	Specifies the maximum number of logged-on users with the same account. The system supports up to 10 users online at the same time using the same account.
Password Management	Maximum Password Age	Specifies the maximum valid days of password. When this time is reached, the system prompts you to modify your password. The maximum days can be set to 180 days.
	Minimum Password Age	Specifies the minimum valid days of password. The password cannot be changed within this time. The maximum days can be set to 30 days.
	Reuse Number of Password	Sets the number of previous passwords that cannot be repeated. For example, if set to 2, it means the new password cannot repeat the last two passwords. The maximum number to be set is 16.
Password Complexity	Minimum Password Length	Specifies the allowed minimum password length in the range of 1-15 characters.

Parameter	Description	
	Maximum Similarity Level	Specifies a value of maximum similarity between the old password and the new password. The system will not accept a new password with a similarity value higher than the value set here. For example, there is a 50% similarity value between "password" and "wordnew". If the maximum allowed similarity value is 30%, then "wordnew" cannot be used to replace the old password "password".
	Minimum Upper Case	Specifies the minimum number of required upper case in the range of 0-2.
	Minimum Lower Case	Specifies the minimum number of required lower case in the range of 0-2.
	Minimum Numeric Characters	Specifies the minimum number of required numeric characters in the range of 0-2.
	Minimum Special Characters	Specifies the minimum number of required special characters in the range of 0-2. Special characters include the characters displayed in *Special Characters Set*.

If a parameter can set to be 0, which indicate no limitations to this option.

3 Click **Update** to apply settings.

System Management

System Configuration Backup/Restore

You can backup and save the system configuration of Polycom® RSS™ 4000 to the local computer for restoring system configuration in case of future use. Supported configurations include:

- UI Customization
- Hard Disk Warning
- Data backup/configuration
- IP setting parameters
- System time
- Recording Setting
- Security setting, including certificate, port and security policy
- Service setting, including AD server and calendar configuration
- Signaling setting, including gatekeeper and QoS Setting

To backup current system configuration:

1. Click **Admin>Config Backup/Restore** in the menu bar at the top of the page.
2. Click **Backup** button on the *Config Backup/Restore* page**.**
3. Set a saving path for the configuration file in the popup Save Files dialog box, and click **Save**.

To restore the system configuration using the configuration file:

1. Click **Admin>Config Backup/Restore** in the menu bar at the top of the page.
2. Click **Open** button on the *Config Backup/Restore* page**.**
3. Select the configuration file in the popup Select Files dialog box, and click **Open**.
   The file path set before will display on the *Config Backup/Restore* page.
4. Click **Upload** to upload the configuration file.
5. Confirm to restart the system in the popup Reboot the System message box to finish configuration restoration.

Data Backup/Restore

Polycom® RSS™ 4000 system is able to backup user data to the FTP server in the network, and restore system user data to the status of selected previous time (based on the time points generated in the backup). Supported user data include:

- Users and groups
- VRR, recording templates and channels
- Archives, including stored archives of various formats, with the exception of raw stream files.

You can choose to back up the entire user data or backup archives separately.

Click **Admin>Data Backup/Restore** in the menu bar at the top of the page to enter *Data Backup/Restore* page.

FTP Server Configuration

Before backing up user data, you need to configure FTP server on the Polycom® RSS™ 4000 for backup.

Polycom ® RSS™ 4000 supports the following FTP servers：

- 3CDaemon
- FileZilla Server
- Serv-U
- Microsoft FTP7.x For IIS7.x
- vsftpd

To configure FTP server for backup:

1. Select **Enable Data Backup/Restore** in the *Data Backup/Restore* page.

2 Configure following parameters in the *FTP Server Configuration* area:

Table 4-30 Description of FTP Server Parameters

Parameter	Description
Server Address	Enter the IP address and port of the FTP server.
User Name	Enter the account and password for login to the FTP server. If the FTP server has anonymous logins enabled, you can click **Use Anonymous** button to log in using anonymous account. **Note:** The registered FTP user should possess read-write permissions to user root directory.
Password	
Enable SSL	Set whether to enable SSL encryption for the communication between Polycom® RSS™ 4000 and FTP server. The system can only support implicit SSL FTP.

3 Click **Update** to apply these settings.

When Polycom® RSS™ 4000 successfully connects to configured FTP server, the *Backup/Restore Status* on the page displays *Connected*, and the *ACTIONS* area on the left of the page shows available operation items: **Backup Now** and **Restore Now**.

User Data Backup

Before backing up user data, set a backup path in the page's *Default Image Back Path* option. If not set, the system will automatically create a folder for storage of files under the home directory of the FTP server.

There are two ways to back up user data on Polycom® RSS™ 4000 to FTP server: automatic periodic backup and immediate manual backup.

To automatically back up user data:

1 Select **Enable automatic backup** on the *Data Backup/Restore* page to enable automatic backup function.

2 Set following parameters:

Table 4-31 Description of Automatic Backup Parameters

Parameter	Description
Frequency	Select the period for automatic backup, measured in day.
Start Time	Select the start time of backup.

3 Click **Update** to apply these settings.

To manually back up the user data:

➢ Click Backup Image Now in the *ACTIONS* area on the Data Backup/Restore page.

Backup/Restore Status on the page shows the number of files being and have backed up. When backup is completed a message pops up at the right bottom of the page signaling successful backup.

User Data Restore

The Polycom® RSS™ 4000 system will automatically generate a time point when successfully backing up user data. You can select the time point to restore the user data on the system to the status of the designated time.

To restore user data:

1. Click **Restore Now** in the *ACTIONS* area on the *Data Backup/Restore* page.
2. Select the time point for the system to restore to on the restore point page that appears and click **OK**.

The system restarts immediately, and then performs restore operations automatically. If you try to log in to the system at this time, you will see a prompt indicating that the system is restoring data. You can log in to the system only after the data restoring process is completed. The administrator can cancel data restoration process by clicking **Cancel**. Endpoints cannot dial into the Polycom® RSS™ 4000 system when the system is restoring user data.

Archives Backup

You need to set a backup path in the *Media Back Path* field on the page before archives backup.

There are two ways to backup archives on Polycom® RSS™ 4000 to an FTP server: automatic periodic backup and full manual backup. The files which have been backed up will not be backed up again, unless full manual backup is conducted.

If the *Auto remove after backup is successfully completed* option at the bottom of the page is selected, then the recorded files will be automatically deleted from system after backup.

To automatically back up archives:

1. Select **Enable automatic backup** in the *Media Backup Configuration* area to enable the automatic backup function.
2. Set following parameters:

Table 4-32 Description of Automatic Backup Parameters

Parameter	Description
Frequency	Select the period for automatic backup, measured in day.
Start Time	Select the start time of automatic backup.

3. Click **Update** to apply these settings.

To manually back up the archives:

- Click Full Media Backup in the *ACTIONS* area on the *Data Backup/Restore* page.

Backup/Restore Status on the page shows the number of files being and have backed up. When a message pops up at the right bottom of the page prompting you for successful backup, the files backup has completed.

System Upgrade

You can upgrade the software version of the system on the *System Upgrade* page. Click **Admin>System Upgrade** in the menu at the top of the page to enter the *System Upgrade* page. Upgrading the software of Polycom® RSS™ 4000 system needs the activation key corresponding to the upgrade pack version. Different software upgrade pack versions may require different activation keys.

To upgrade from Version 5.0 to Version 6.4

To upgrade the system from V5.0 to V6.4, you need to complete the following two procedures:

1. Install Version 6.4 upgrade packs on the system
2. Activate the upgraded system

If you do not activate the system, you can still use the Web interface, but cannot perform incoming calls, recording, live streaming and video on-demand operations using the system.

To install Version 6.4 upgrade pack:

1. Download V6.4 software packs needed for upgrade from Polycom website (http://www.polycom.com/support/network/index.html) to the local computer:
   - **RSS 4000 Version 6.4 Software Upgrade Package, Part1**
   - **RSS 4000 Version 6.4 Software Upgrade Package, Part2**
2. Click **System Configuration>Upgrade/Reset System** on the Web interface of the Polycom® RSS™ 4000 system v5.0.
3. Click *License Agreement* on the *Upgrade/Reboot System* page and read the license agreement. You need to select **Agree** to continue the upgrade.
4. Click the **Browse** button, select the first upgrade pack (Part1), and click **Download File**.
5. In the popup alert box and confirm box, always click **Yes.**
6. Click **Restart** button on the page to restart the system.
7. Re-log in to the Polycom® RSS™ 4000 system after the system is restarted. Click the **Upload RSS Package** button in the page that appears, to upload the second upgrade pack (Part2).
8. After uploading the file, and when the *Server Status* at the top of page is IDLE, click the **Reboot system** button to restart the system.

To activate the upgraded system:

1. Log in the Web configuration interface after the system is restarted. You are brought to the *Product Activation* page and prompted to activate the device.
2. Click *Polycom Resource Center* link to enter the Polycom Resource Management Center.

3 Enter your Email address and password to log in or register for a new account.

4 Go to **Licensing & Product Registration > Activation/Upgrade**.

5 Follow the page prompts step by step to generate the Key Code required for system activation.

If you are required to enter the License Number and Serial Number of the device, you can find them from the document provided with the Polycom® RSS™ 4000 device.

6 Go back to the *Product Activation* page, enter the activation key you obtained into *Activation Key* box, and click **Save**.

7 Confirm to restart the system in a popup *System Reboot* box.

Log in to the Web interface after the system is restarted and enter **Admin>Product Activation** where the system software version is shown to be 6.4. This means that the system has upgraded successfully and is ready for use.

Version 5.0 remaining operation

After upgrading the system to Version 6.4, it will only retain the previous IP address from Version 5.0 and restore other configurations to the default configuration. As Version 5.0 original system files and recorded archives remain after upgrading, users can either import the Version 5.0 recorded files into upgraded system or restore from the Version 6.4 to Version 5.0. After upgrading the system to Version 6.4, half of hard disk space (500G) will be used for storing files under v5.0. If you need more free space after upgrading, please choose to clear v5.0 files. After deleting v5.0 files, the system cannot be restored from v6.4 to v5.0 again.

Import recorded files from v5.0:

1 Click **Admin>Data Backup/Restore** in the menu bar at the top of the page.

2 Click **Import media from v5** in the *ACTIONS* area on the left of the page.

The recorded files imported from version 5.0 can only be used for video-on-demand and downloaded through the Web interface of the system, but they cannot play back from the endpoint TV UI.

Restore the system from v6.4 to v5.0:

After restoring to v5.0, the system cannot inherit configurations and recorded files from v6.4 system. They can only be used after being upgraded to v6.4 again.

1 Click **Admin>Data Backup/Restore** in the menu bar at the top of the page.

2 Click **Roll back to v5** in the *ACTIONS* area on the left of the page.

Delete v5.0 system files:

Before deleting v5.0 files, please make sure if it is necessary for you to import the v5.0 recorded files. After deleting v5.0 files, the released hard disk space will be used for v6.4 after being upgraded, and the free capacity of the system is 1T, which cannot be restored to v5.0.

1. Click **Admin>Data Backup/Restore** in the menu bar at the top of the page.
2. Click **Format v5 Disk** in the *ACTIONS* area on the left of the page.

To upgrade from Version 6.0 to Version 6.4

To upgrade the system from V6.0 to V6.4, you need to complete the following two procedures:

1. Install Version 6.4 upgrade pack on the system
2. Activate the upgraded system

If you do not activate the system, you can still use the Web interface, but cannot perform incoming calls, recording, live streaming and video on-demand operations using the system.

To install Version 6.4 upgrade pack:

1. Download V6.4 software pack needed for upgrade from Polycom website (http://www.polycom.com/support/network/index.html) to the local computer:
   - **RSS 4000 Version 6.4 Software Upgrade Package, Part2**
2. Click **Admin>System Upgrade** on the Web page of the Polycom® RSS™ 4000 system v6.0.
3. Click *Viewing License Agreement* on the *System Upgrade* page and read the license agreement. Select *I have read and agree to the terms of the license agreement* to continue the upgrade.
4. Click the **Open** button, select the upgrade pack (Part2), and click **Upload**.
5. A popup dialog box will ask you whether to restart the system, click **Reboot Now**.

To activate the upgraded system:

1. Log in the Web configuration interface after the system is restarted. You are brought to the Product Activation page and prompted to activate the device.
2. Click *Polycom Resource Center* link to enter the Polycom Resource Management Center.
3. Enter your E-mail address and password to log in or register for a new account.
4. Go to **Licensing & Product Registration > Activation/Upgrade**.
5. Follow the page prompts step by step to generate the Key Code required for system activation.

If you are required to enter the License Number and Serial Number of the device, you can find them from the document provided with the Polycom® RSS™ 4000 device.

6 Go back to the Product Activation page, enter the activation key you obtained into *Activation Key* box, and click **Save**.

7 Confirm to restart the system in a popup System Reboot box.

Log in to the Web interface after the system is restarted and enter **Admin>Product Activation** where the system software version is shown to be 6.4. This means that the system has upgraded successfully and is ready for use.

If the V6.0 system is upgraded from V5.0, and has not imported recorded files or deleted V5.0 files, then these operations can be performed or the system can be restored to V5.0 on the Admin>Data Backup/Restore page after upgrading to V6.4. See *Version 5.0 remaining operation*.

Product Activation

The Product Activation page is used in following activation operations:

- Activate the new Polycom® RSS™ 4000 system
- Activate the upgraded system
- Activate charged functions

Click **Admin>Product Activation** in the menu bar up on the Web interface to enter the *Product Activation* page where you can view system information.

***Table 4-33** System Information Description*

Parameter	Description
Hardware Version	The current hardware version of the system.
Software Version	The current version of the software running on the system.
Serial Number	Specifies the product serial number of the system.
Activation Status	Indicates whether the system is activated. After the system is successfully activated, ✔ displays, and otherwise ⊘ displays.
Max Recording Ports	The maximum number of recordings ports supported by the system.
Max Live Steaming Ports	The maximum number of live streaming ports supported by the system.
Max RTSP Sessions	The maximum number of Web video-on-demand supported by the system. Reach up to 200.
Encryption	Indicates whether the AES encryption function of the device is activated. This is a charged function. You can only use it after purchasing the License and activating it. When the encryption function is activated, ✔ displays, and otherwise ⊘ displays.

Parameter	Description
Multicast	Indicates whether the multicast function of the device is activated. This is a charged function. You can only use it after purchasing the License and activating it. After activating the function, the system can multicast the recorded videos to multiple groups of computers in the network. When the multicast function is activated, ✔ displays, and otherwise ⊘ displays.
HD Live Streaming	Indicates whether the high resolution live streaming function of the device is activated. This is a charged function. You can only use it after purchasing the License and activating it. Once this function is activated, the device can live stream 720p resolution videos. This license also increases the Web streaming capacity from 100 to 200 simultaneous unicast connections. When the high resolution live streaming function is activated, ✔ displays, and otherwise ⊘ displays.

You may enter the obtained activation key in the **Activation Key** text box of the page, and click **Update** to activate Polycom® RSS™ 4000 system or charged functions. Click *Polycom Resource Center* link to enter the Polycom Resource Center and obtain the activation key.

UI Customization

Polycom® RSS™ 4000 system IVR information, Web Management interface Logo, endpoint interface language, background picture and system name can be customized to meet your organization needs.

Click **Admin>UI Customization** in the menu bar at the top of the page to enter the UI Customization page.

IVR Customization

Polycom® RSS™ 4000 provides Interactive Voice Response (IVR) service. After the endpoint dials the Polycom® RSS™ 4000 system and gets connected, you can hear different IVR voice prompts when you receive the endpoint menu from the operation system.

To customize the IVR information:

1. Click Admin>UI Customization in the menu bar at the top of the page.
2. Select the IVR information to be replaced and corresponding language option in Select IVR Message to Play in the IVR Message area.
3. Click **Open** to select the audio file to be uploaded.

   The audio file to be uploaded must be in PCM format, and the sampling frequency must be 16 or 32 KHz, 16bit, and stereo or mono.
4. Click **Upload** to upload the audio file.

After the file is uploaded successfully, you can click the corresponding Play/Stop button to test and play the prompt voice and verify if the file replacement is successful.

Customizing Web Interface Logo

The Logo displayed at the top of the system Web interface can be replaced with the Logo of your organization as needed.

To customize the Logo picture of the Web Management interface:

1. Click **Admin>UI Customization** in the menu bar at the top of the page.
2. Click **Open** in the *Web User Interface Logo* area to select the picture to be uploaded.

   The uploaded pictures must be in the *.png format, with 212 * 54 pixels.
3. Click **Upload** to upload the picture.

After the picture is uploaded successfully, you need to close the browser and reopen it to see the new configuration.

Customizing Endpoint Menu

After you dialed and established connection to the Polycom® RSS™ 4000 from the endpoint, you can see a menu interface from the Polycom® RSS™ 4000 (see *TV User Interface Operation*). You can customize the default background picture and displayed language of the endpoint menu interface. RSS system provides seven languages. The default language is English.

To customize the background picture of the endpoint menu:

1. Click **Admin>UI Customization** in the menu bar at the top of the page.
2. In the **Endpoint Menu Background** area on the UI Customization page, click the correct **Open** button according to screen width/height ratios of participants' endpoint displays, and select the picture to be uploaded.

   The picture must meet the following requirements:
   - 4:3: You are required to upload pictures in the *.bmp format, with 704 * 576 pixels.
   - 16:9: You are required to upload pictures in the *.bmp format, with 1024 * 576 pixels.
3. Click **Upload** to upload the picture.

To change the default endpoint menu language:

1. Click **Admin>UI Customization** in the menu bar at the top of the page.
2. Select a default endpoint language in the **Default Endpoint Menu Language** area on the UI Customization page and click **Apply**.
3. Confirm to restart the system in the popup System Reboot box to apply settings.

Changing System Name

The system name displays on the endpoint or MCU device when they are connected to the Polycom® RSS™ 4000 system.

To change the system name:

1. Click **Admin>UI Customization** in the menu bar at the top of the page.

2 Enter your system name in the **System Name** text box on the UI Customization page and click **Apply**.

3 Click **Reboot Now** in the popup message box to restart the system and apply settings.

System time

Setting accurate system time ensures the correct display of time information such as recording and backup time. The built-in clock of the system can also be synchronized with a network time server.

To set the system time:

1 Click **System Config>System Time** in the menu bar at the top of the page.

2 Configure the following parameters in the *System Time* page:

Table 4-34 System Time Parameters Description

Parameter	Description
The time service	Specifies the way to set the system time: ▪ The Console: synchronizes time with user computer. ▪ The NTP Server: obtains time from a time server.
Date	Indicates the current date and time of the system. When *The Console* is selected, you can obtain user computer current time after refreshing the page. Manually changing the time here is not recommended.
Time	
NTP servers	Specifies the address or domain name of a network time server. The system built-in clock can be synchronized with the time server. **Note:** If you set a domain name, make sure you have already set a DNS server address that can resolve this domain name in **System Config>IP Setting**.

Restart and Shutdown

Click **Admin>Shut Down** on the Web interface to enter the *Shut Down* page.

Clicking the **Restart** button will restart the system; clicking **Shut Down** will shut down the system.

Before unplugging the system, you need to shut it off via the Shutdown page to turn it off.

Restoring Factory Default Configuration

You can clean the system and restore it to the factory default configuration through its USB port. Only the software version and system IP address can be reserved. You need to use an USB storage device before you restore the system to the default status. There is no requirement on USB device type and files it stores.

- All current configuration and recorded archives will be cleared after the system is restored to the default configuration.
- Before the system restarts to complete restoring to the factory default configuration, please remove the USB device connected to the system. Otherwise, after the system restarts, you will receive a default configuration setting dialog box when you try to log in to the Web UI.

To restore the system to the factory default status:

1. Connect the USB storage device to the USB port on the back panel of the system.
2. Restart the device manually, or click **Restart** on the Shutdown page (**Admin>Shut Down**) to restart the system.
3. After the system restarts, log in to the Web Configuration page. A default configuration setting dialog box will display on the page.
4. You can configure following parameters:

Table 4-35 Default restoration Parameters Settings

Parameter	Description
Build-in Account	System built-in default administrator account. The user name and password can be modified here.
Password	
Confirm Password	Specifies the confirm password.
Keep current IP setting	Specifies whether or not the default configuration restoration reserves the current system IP address. If not selected, the system will reset the IP address to the default 192.168.1.254, subnet mask to 255.255.255.0, and gateway to 192.168.1.1.

5. Click **Next**; if you want to continue, enter **YES** in the box to confirm restoration, and click **OK**. Click **Back** button to go back to the setting box.
6. Remove the USB storage device before the system restarts to complete restoration.

System Recovery

The system will enter rescue mode automatically when it fails to reboot. For information about the rescue mode, refer to the *Using the Rescue Mode of RSS 4000*guide provided with the system.

5

TV User Interface Operation

In addition to Web interface, the Polycom® RSS™ 4000 also provides TV UI for end users to perform the most commonly used recording and playback operations through the remote control. The TV UI (User Interface) from Polycom® RSS™ 4000 system will display on the screen after an endpoint dials the Polycom® RSS™ 4000 and sets up a connection successfully.

Introduction to Main Menu Page

After the endpoint sets up connection with the Polycom® RSS™ 4000 system, it enters the TV UI menu page, where common recording and playback options are provided, as shown below. If the **Recording Immediately** function has been enabled in the VRR used by the endpoint for dialing, the endpoint enters Recording page directly. When the recording is stopped or cancelled, the endpoint returns back to the main menu page.

Figure 5-1 TV UI Main Menu in Polycom® RSS™ 4000 System

You can control the Polycom® RSS™ 4000 using the FECC and DTMF functions of the remote control. When your endpoint supports FECC or DTMF, use the remote control to operate the TV UI menu page. You need to press the far end key on the endpoint's remote control to access the TV UI.

The table below defines in detail the FECC and DTMF operation keys on the remote control of Polycom endpoint.

Table 5-36 FECC and DTMF Control Keys

Scenario	FECC	DTMF	Description
when in the menu display state	←	4	Return to the higher-level menu.
	→	6	▪ Go to the lower-level menu. ▪ Confirm the selection.
	↑	2	Select upward (cyclic).
	↓	8	Select downward (cyclic).
	Zoom In	-	Turn to the next page if the menu items cannot be displayed on one page.
	Zoom Out	-	Turn to the previous page if the menu items cannot be displayed on one page.
When in the video playing state	-	*1	Pause the current video.
	-	*2	Resumes a paused video.
	↑	*3	Stops playback of the current video and returns to the main menu.
	←	*4	Reverses the current video. Reverse will stop at the previous I-frame. The Web UI can be used to set the interval between I-frames. The Polycom ® RSS™ 4000 has a default interval between I-frames of one minute; the interval can be set as 1-10 minutes.
	→	*6	Fast forwards the current video. Fast forward will stop at the next I-frame. The Web UI can be used to set the interval between I-frames. The Polycom ® RSS™ 4000 has a default interval between I-frames of one minute; the interval can be set from 1-10 minutes.
	-	0-9	Quickly jumps through video playback, from 0% to 90% play time positions); after jumping, the video will start to play from the nearest I-frame. For example, the DTMF tone 7 will jump 70% of the way through the video file.
When in the inputting state	-	0-9	Input numbers.
	-	#	Confirm the input.
	←	-	Delete the character before the cursor.

Start Recording

You can use the up/down arrow keys of the remote control to select **Start Recording** on the main menu page, then press the right arrow key to enter the Recording menu page.

You can choose to start recording directly or set a PIN code for recording. If you set a PIN code for the video to be recorded, you must input the correct PIN code to play back the video.

To set PIN code:

1. Select **Set PIN Code** on the Recording menu page and press the right arrow key to confirm.
2. On the PIN code setting page, input the PIN code consisting of up to 15 digits through the number keypad on the remote control.
3. Press "#" to confirm or press the left arrow key to exit the set-up and return to the Recording page.

To start recording:

Select **Start** on the Recording menu page and press the right arrow key to confirm.

The recording icon blinking on the screen indicates that the recording is in progress. Then, you can use the menu page to:

- **Pause**: Pause recording. Once paused, recording can be resumed by choosing **Resume**.
- **Stop and Save**: Stop recording and save the recorded file.
- **Cancel**: Cancel recording and return to the main menu.

- During recording, you can press the left arrow key to watch the endpoint loopback video that is being recorded, or press the right arrow key to close the loopback video and switch back to menu page.
- If the video is being played through live streaming, the Pause function cannot be used.

Viewing Archives

The user can view not only the files recorded by the currently dialed-in VRR, but also all video files recorded and saved into the current Polycom® RSS™ 4000.

If the bandwidth at which a user endpoint connected with Polycom® RSS™ 4000 is lower than the bandwidth for certain recorded files, such files would not display on that endpoint's screen.

To view the videos recorded by current VRR:

1. Select **View VRR Archives** on the main menu page and press the right arrow key to confirm.
2. Select a file to be viewed in the list and confirm the selection by pressing the right arrow key.

   You can use the up/down arrow keys to select the file, and press Zoom out/Zoom in to turn page.

   When you highlight a file, its related information, such as record time, duration and VRR used will display on screen.
3. If a message pops up to prompt you to input the PIN code, you can input the correct PIN code through the number keypad on the remote control and then press "#".

   If the PIN code you input is wrong, the system returns to the File List page.

During the playback of video, you can press the up arrow key on the remote control to exit playing and return to the file list.

To view all videos recorded on Polycom® RSS™ 4000:

Select **View All Archives** on the main menu page, and then press the right arrow key to enter the list of all archives. Please refer to playing back archives procedure in *Viewing the Videos Recorded by Current VRR*.

6

Appendix A – Telnet/Terminal Commands

Polycom® RSS™ 4000 supports device debugging from the command line. You can configure command settings in either of the following two methods: using the HyperTerminal after connecting it to the device through a serial port or configuring via telnet. Both methods use the same command format. Next, we will describe how to configure command setting using the HyperTerminal.

HyperTerminal Parameters

- Port: COM1 (basing on the port used)
- Baud rate: 115,200 bps
- Data bits: 8 bits
- Parity bit: None
- Stop bit: 1

Furthermore, you may need to set some other parameters based on the simulation software used:

- No echo for local input
- The settings for the DEL and Backspace keys
- Enter/New line
- The simulation type for the endpoint: Automatic or ANSI

Login

If you have completed all the above configurations and launched the HyperTerminal simulation software successfully, press the **Enter** key. The login interface appears.

The login interface shows all of the software information and you'll be prompted to enter the login password. Now enter the login password and press the Enter key.

The factory default login password is POLYCOM (case sensitive).

If you entered a wrong password, you may be required to re-login to the system.

If you entered the right password, you will be brought directly to the command setting interface.

Command Introduction

Help

After logging into the system, you may enter **?** or **help** after the prompt "#" to show the command prompt information.

- "<>" indicates an optional parameter
- "{}" indicates a required parameter
- "|" indicates a 1-out-of-N parameter

Exit

Enter "exit" after the prompt "#" to exit the command control interface.

```
# exit


User logged off
```

View Device Information

Enter **show** after the prompt # to view the current device information, including the system information, license information, interface information and IP address.

Idle Timeout Setting

Enter **keepalive<timeout>** after the prompt # to modify the keep-live timeout setting.

Table 6-37 Parameters Description

Parameter	Description
timeout	Defaults to 120 seconds and can be modified to any value in the range of 5 – 600 seconds

[Example] Set the timeout time to 60 seconds:

```
# keepalive 60
current keepalive timeout value is 60 seconds
```

Reboot Device

Type "reboot" after the prompt "#" to restart the system. The system will show the prompt message "Are you sure?". Type "Y" to restart the system, or type "N" to cancel.

```
# reboot


Are you sure reboot now? [Y for yes / N for no]
```

Reset Password

Type "reset password" after the prompt "#" to restore the administrator user password for Web login to the default password (admin). The system will show the prompt message "Are you sure?". Type "Y" to proceed, or type "N" to cancel.

Restore System Configuration

Type "reset config" after the prompt "#" to restore the following system configurations to the default value:

- System Config
  - IP Setting
  - System time
  - Recording Setting
  - Security setting (Ports and security policy)
  - Service Setting
  - Signaling Setting
- Admin
  - UI Customization (System name and default endpoint menu language)
  - Disk Warning

The system will show the prompt message "Are you sure?". Type "Y" to proceed, or type "N" to cancel.

After resetting the system configuration, the system must be restarted in order for the new settings to take effect.

If you need to completely restore the system please refer to *Restoring Factory Default Configuration*.

Clean Activation Key

Type "cleankey" after the prompt "#" to remove the existing activation key. This command is used to deactivate the RSS™ 4000 system.

The system will show the prompt message "Are you sure?". Type "Y" to proceed, or type "N" to cancel.

Telnet Setting

Type "telnet {on | off}" after the prompt "#" to turn on/off the telnet session. For example, enter "telnet on" to enable telnet function.

The default setting is telnet on. If "telnet off" is entered to disable the telnet function of the Polycom ® RSS™ 4000, user can only use the serial port to perform above system setting tasks. The default telnet port is 23, which cannot be modified. The password and command operations for remote telnet login are identical to those for serial port login.

Password Modification

Type "set telnet password" after the prompt "#" to modify the login password for the Command Setting page.

This command is only used to change the login password for the telnet session and serial interface. It does not impact the Web UI password.

```
# set telnet password

enter new password:
```

Ping

Enter ping <ip> {-n<count>} {-w<time>} {-l<size>} after the prompt "#" to check the network connection status.

Table 6-38 Parameters Description

Parameter	Description
ip	IP address of the destination host
-n<count>	Packet sending times, defaulted to 10
-w<time>	Waiting time, defaulted to 1000 ms
-l<size>	Size of the sent packet, defaulted to 32 bytes

[Example] Send the host whose IP address is 172.21.100.111 a Ping packet with the size of 1500 bytes for five times cyclically. The wait time is 1000 ms:

```
# ping 172.21.100.111 -n5 -w1000 -l1500

Pinging 172.21.100.111 with 1500 bytes, loop 5 times, wait 1000 ms.

1520 bytes from 172.21.100.111 : seq=1, ttl=127, delay=1ms.
1520 bytes from 172.21.100.111 : seq=2, ttl=127, delay=2ms.
1520 bytes from 172.21.100.111 : seq=3, ttl=127, delay=2ms.
1520 bytes from 172.21.100.111 : seq=4, ttl=127, delay=2ms.
1520 bytes from 172.21.100.111 : seq=5, ttl=127, delay=1ms.

send 5 packets, receive 5 packets, lost 0(0.0%) packets.
time is 5005ms, bandwidth is 12.1kbps
```

Network Setting

Enter the following commands after the prompt "#" to set network configurations:

"set {lan1 | lan2} ip {dhcp | static <ip> netmask <mask> gw <gateway>}" - set the IP address for LAN 1 or LAN 2.

"set {lan1 | lan2} speed {auto | 1000 | 100 full | 100 half | 10 full | 10 half}" - set the connection features for the LAN 1 or LAN2 interface.

Table 6-39 Network Setting Parameters – LAN Interface IP Address

Parameter	Description
dhcp	Automatically gets the address information through the DHCP server.
static	Specifies the static IP address information - Ip: IP address of the network port mask: subnet mask of the network port gateway: gateway address of the network port

Table 6-40 Network Setting Parameters – LAN Interface Connection Rate

Parameter	Description
auto	Auto negotiation mode
1000	1000Mbps
100 full	100Mbps full duplex
100 half	100Mbps half duplex
10 full	10Mbps full duplex
10 half	10Mbps half duplex

[Example 1] Set the IP address of the LAN1 interface to 172.21.103.29, subnet mask to 255.255.255.0, and the gateway address to 172.21.103.254:

```
# set lan1 ip static 172.21.103.29 netmask 255.255.255.0 gw 172.21.103.254

Reboot is require in order for the change to take effect. Reboot now? [Y for yes
 / N for no]Y

restart system ...
```

[Example 2] Set the 100M half duplex for the LAN1 interface:

```
# set lan1 speed 100 half


Reboot is require in order for the change to take effect. Reboot now? [Y for yes
 / N for no]Y

restart system ...
```

After you set the connection feature or IP address for the LAN interface, the system must be restarted in order for the new settings to take effect.

7

Appendix B – Regulatory Notices

Important Safeguards

Read and understand the following instructions before using the system:

- Close supervision is necessary when the system is used by or near children. Do not leave unattended while in use.
- Only use electrical extension cords with a current rating at least equal to that of the system.
- Always disconnect the system from power before cleaning and servicing and when not in use.
- Do not spray liquids directly onto the system when cleaning. Always apply the liquid first to a static free cloth.
- Do not immerse the system in any liquid or place any liquids on it.
- Do not disassemble this system. To reduce the risk of shock and to maintain the warranty on the system, a qualified technician must perform service or repair work.
- Connect this appliance to a grounded outlet.
- Only connect the system to surge protected power outlets.
- Keep ventilation openings free of any obstructions.
- If the system or any accessories are installed in an enclosed space such as a cabinet, ensure that the air temperature in the enclosure does not exceed 40°C (104° F). You may need to provide forced cooling to keep the equipment within its operating temperature range.
- Do not use this product near water.
- Avoid using this product during an electrical storm. There may be a remote risk of electric shock from lighting.

SAVE THESE INSTRUCTIONS.

Regulatory Notices

USA and Canadian Regulatory Notices

This Class [A] digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe [A] est conforme à la norme NMB-003 du Canada

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: This device may not cause harmful interference, and this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense

In accordance with part 15 of the FCC rules, the user is cautioned that any changes or modifications not expressly approved by Polycom Inc. could void the user's authority to operate the equipment.

EU Regulatory Notices

This Polycom® RSS™ 4000 has been marked with the CE mark. This mark indicates compliance with EEC Directives 2006/95/EC and 2004/108/EC. A full copy of the Declaration of Conformity can be obtained from Polycom Ltd, 270 Bath Road, Slough, Berkshire, SL1 4DX, UK.

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づくクラスA 情報技術装置です。 この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。 この場合には使用者が適切な対策を講ずるよう要求されることがあります。

声明

此为A级产品，在生活环境中，该产品可能会造成无线电干扰。在这种情况下，可能需要用户对其干扰采取切实可行的措施。

A 급 기기 (업무용 정보통신기기)

Regulatory Notices

이 기기는 업무용으로 전자파적합등록을 한 기기이오니
판매자 또는 사용자는 이 점을 주의 하시기 바라며, 만약
잘못판매 또는 구입하였을 때에는 가정용으로 교환하시기
바랍니다.

WARNING

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Electrical safety advisory

We recommend that you install an AC surge arrestor in the AC outlet to which this device is connected. This action will help to avoid damage to the equipment caused by local lightning strikes and other electrical surges.

Special Safety Instructions

Follow existing safety instructions and observe all safeguards as directed.

Installation Instructions

Installation must be performed in accordance with all relevant national wiring rules.

Mechanical Loading - Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

Circuit Overloading - Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

Reliable Earthing - Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips).

Plug Acts as Disconnect Device

The socket outlets to which this apparatus is connected must be installed near the equipment and must always be readily accessible.

Lithium coin cell warning

This equipment contains a Lithium coin cell which is not user serviceable. Refer servicing to qualified service personnel only. Do not attempt to open the case of this product.

Caution

Danger of Explosion if Battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer.

Dispose of used batteries according to the manufacturer’s instructions.

ADVARSEL!

Regulatory Notices
Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering. Udskiftning må kun ske med batteri af samme fabrikat og type. Levér det brugte batteri tilbage tilleverandøren.